Ancient Rome in 1885

J. H. Middleton

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1 Arch of Constantine
2 Dolabella
3 Jonas
4 Septimius Severus in the Forum
5 in the Velabrum
6 Atrium of Vesta
7 Basilica Ulpia
8 Mamertine Prison
9 Palace of Caligula
10 Column of M. Aurelius
11 Phocas
12 Trajan
13 Colossus Nero
14 Forum Palladium
15 Meta Sudans
16 Obelisk of the Lateran
17 of S.M. Maggiore
18 of the Minerva
19 P. del Popolo
20 Piazza Navona
21 Quirinal
22 Pantheon
23 on M. Citorio
24 of Trinita dei Monti
25 on the Pincian
26 of the Vatican
27 Villa Mattei
28 Portcus of Octavia
29 Tomb of Bibulus
30 Site of the Septizonium
32 Temple of Faustina
32 Concord
33 the Dii Consentes
34 Saturn
35 Fortune
36 Mars Ultor
37 Remains
38 Torre de' Conti
39 della Milizia
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showing the Municipal Scheme
for the
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1885.
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Obelisk of the Minerva
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Obelisk of Piazza Navona
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Obelisk of Trinita dei Monti
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Obelisk of the Vatican
Obelisk of Villa Mattei
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Forum Boarium
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A&C. BLACK. EDINBURGH
W. & A. K. Johnston

ANCIENT ROME

IN 1885

BY

J. HENRY MIDDLETON

"Possis nihil urbe Roma
Visere majus."—HOR. *Car. Sec.* 11.

EDINBURGH
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ANCIENT ROME IN 1885

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INTRODUCTION.

An excuse for adding one more to the already long list of books on the Archæology of Rome may perhaps be partly supplied by the fact that the last few years have been extraordinarily fertile in the discoveries of hitherto unknown remains, and in the new light that has been thrown on many of those that have for long been visible. To excavations made during the last ten years is due the complete exposure of the whole area of the *Forum Magnum* and much of the ground near it; the determination of the real form of the Rostra of Julius Cæsar; the discovery of most important remains of the Temple of Vesta, the Regia, the House of the Vestals, and the line of the Nova Via. The great Servian Agger, with countless early tombs and houses of all dates, have, during the same period, been brought to light by the extensive excavations made in laying out a new quarter of modern Rome. Most important of all, in its relation to the early history of Rome, has been the discovery of a large Etruscan Necropolis on the Esquiline Hill, which implies the existence, at a very remote period, of a great city of the Rasena, highly advanced in culture and technical skill in all the minor arts of life—a serious blow to the long established tradition of the early supremacy of the Latin race in the city of the seven hills.

Moreover, in the following pages an attempt has been made to describe the buildings of ancient Rome with increased attention to detail and methods of construction—points which are usually passed over too lightly by those antiquaries who

are without any practical acquaintance with the actual processes and materials employed in building.

Great as must always be the value of documentary evidence, such as that which is supplied by inscriptions, coins, and the long list of classical writers mentioned below, yet it is of quite equal importance for the student to learn to read the story told by each building itself—a record by no means clear, and which requires long and careful study of what may at first sight appear to be matters of small moment.

It is not only the general design of a building, the contours of its mouldings, or the style of its sculpture, which supplies valuable evidence as to its history, but no less important help is often to be gained by the minute examination of such purely constructional points as the composition of the concrete, the form of the wood centering shown by its imprints on the vaults, and countless other technical details.

It is hoped, too, that the plans and other illustrations may be of assistance to future students—especially the plan of the Forum, which has been measured and drawn by the author entirely afresh, and shows for the first time the whole extent of the area of the Forum and most of its surrounding buildings. The latest excavations, down to 1885, are shown on the plan of the Palatine Hill and on that of the House of the Vestals.

Before passing on to the subject in hand it may be well to give a list of the various sources of information on the Archæology of Rome, with the names of the chief books and periodicals which should be consulted by those who wish to enter upon the subject in a more thorough way than has been attempted in the following incomplete and scanty volume.

The sources of information on the Archæology of Rome may be classified in the following way :—

I. Classical Writers.

II. Inscriptions and Coins.

III. The Regionary Catalogues and other Documents of the decadence and Middle Ages.

IV. A number of works, mostly illustrated, dating from the revival of interest in Classical Antiquities in the fifteenth century down to the present century, and old pictures which show classical buildings now destroyed.

V. Modern Works.

I. The following are the chief classical writers who give information on the antiquities and topography of Rome :—

Plautus, *Roman Dramatist:* b. c. 254 B.C. — d. 184 B.C. Wrote an immense number of *Comedies*, a few of which exist.

Ennius, *Poet and Historian:* b. 239—d. 169 B.C. Wrote *Annals of Rome, Satires, and Tragedies*, of which only fragments exist.

Polybius, *Greek Historian:* b. c. 204—d. c. 122 B. C. Wrote a *History of Rome, Greece, and other countries*, in forty books, of which the first five exist, and fragments of others.

P. Terentius Afer, native of Carthage, a *Roman Comic Poet:* b. 195 —d. c. 159 B.C. Wrote *Comedies*, of which six exist.

M. Terentius Varro, *Roman Antiquary and Philologist:* b. 116—d. 28 B.C. Wrote *De Lingua Latina, De re Rustica, Antiquitatum Libri*, and other works.

M. Tullius Cicero, *Roman Orator and Statesman:* b. 106—d. 43 B.C. Wrote *Orations, De Natura Deorum, De Legibus*, and many other works on *philosophy, theology*, and *history*, together with *Poems* and *Miscellaneous Essays*, mostly full of topographical allusions.

C. Sallustius Crispus, *Roman Historian:* 86–34 B.C. Wrote on the *Jugurthine War* and *Catiline Conspiracy*, as well as a *History of Rome*, in five books, which is now lost.

Valerius Catullus, *Roman Poet:* 87–c. 47 B.C. Wrote *Odes*, of which 116 exist.

P. Virgilius Maro, *Roman Poet:* 70–19 B.C. The *Æneid* contains many references to Rome and its history.

Q. Horatius Flaccus, *Roman Poet:* 65–8 B.C. Wrote *Odes, Epistles, Ars Poetica*, and *Satires:* the latter have many passages illustrative of Roman topography.

Titus Livius, the chief *Roman Historian*, 59 B.C.–17 A.D. His *History of Rome*, which ends with the year 9 B.C., consisted of 142 books, of which 35 exist complete, with *Epitomes* of all the lost books, except two.

DIODORUS SICULUS, *Greek Historian:* reign of Augustus. Wrote *Bibliotheca Historica.*

P. OVIDIUS NASO, *Roman Poet:* b. 43 B.C.—d. A.D. 18. Wrote *Fasti, Tristia, Epistolæ ex Ponto,* and other works. The *Fasti* are specially valuable to the student of Roman archæology.

ALBIUS TIBULLUS, *Roman Poet:* b. c. 54—d. c. 18 B.C. Wrote *Elegies,* of which two genuine books exist.

SEXTUS AURELIUS PROPERTIUS, *Roman Poet:* b. c. 52—d. c. 10 B.C. Wrote *Elegies.*

STRABO, *Greek Geographer:* b. c. 54 B.C.—d. after 20 A.D. Wrote on the *Geography* of the known world, in 17 books.

DIONYSIUS OF HALICARNASSUS, *Greek Historian:* died 7 B.C. Wrote *History of Rome.*

M. VITRUVIUS POLLIO, *Roman Engineer and Architect:* b. c. 80 B.C., date of death unknown. Wrote *De Architectura,* in the reign of Augustus, a most interesting and valuable work.

C. VELLEIUS PATERCULUS, a *Roman Historian:* b. c. 20 B.C.—d. c. A.D. 31. Wrote *Historia Romana,* published in A.D. 30.

M. VALERIUS MAXIMUS, *Roman Historian:* reign of Augustus and Tiberius. Wrote *De Factis Dictisque Memorabilibus, Libri IX.,* a curious collection of historical anecdotes.

AULUS PERSIUS FLACCUS, a *Roman Satiric Poet:* 34–62 A.D. Wrote *Satires,* of which six books exist.

DECIMUS JUNIUS JUVENALIS, *Roman Satiric Poet:* middle of first century A.D. Wrote *Satires,* which contain many passages illustrative of Roman topography.

C. SILIUS ITALICUS, *Roman Poet:* middle of first century A.D. Wrote a heroic poem in 17 books, entitled *Punica,* on the second Punic War, from the taking of Saguntum down to the triumph of Scipio Africanus.

FLAVIUS JOSEPHUS, *Jewish Historian:* b. 37 A.D.—d. after 97. Wrote in Greek the *History of the Jewish Wars;* a book on *Jewish Antiquities,* and other works.

P. PAPINIUS STATIUS, *Roman Poet:* c. 61–c. 96 A.D. Wrote *Sylvæ, Thebais,* and *Achilleis.* The first of these poems contains descriptions of various parts of Rome in the reign of Domitian.

C. CORNELIUS TACITUS, *Roman Historian:* b. c. 55 A.D.—d. after 117 A.D. Wrote *Annales* and *Historiæ Romæ,* and other works of great importance to the student of Roman antiquities.

C. SUETONIUS TRANQUILLUS, *Roman Historian:* second half of the first century A.D. Wrote *Lives of the Cæsars* down to Domitian, of the highest value and interest, together with many other works now lost.

M. ANNAEUS LUCANUS, *Roman Poet:* 39–65 A.D. Wrote the *Pharsalia,*

a poem in 10 books, descriptive of the struggle between Pompey and Cæsar.

PLINY THE ELDER (*C. Plinius Secundus*): 23–79 A.D. Wrote an Encyclopædia of general information, called *Historia Naturalis*, which contains much valuable information on the buildings of Rome and their works of art.

PLINY THE YOUNGER (*C. Plinius Cæcilius Secundus*) b. 61—d. after 110 A.D., was the nephew of the elder Pliny; he practised as an advocate in the *Basilicæ* of Rome, and wrote a *Panegyricus* and *Epistolæ*, the latter of special interest.

PLUTARCH, a *Greek Historian and Moralist:* second half of the first century A.D. Wrote *Lives of forty-six distinguished Greeks and Romans*, and a work called *Quæstiones Romanæ*, which contains much curious information on Roman antiquities.

M. VALERIUS MARTIALIS, *Roman Poet:* b. 43—d. after 104 A.D. Wrote *Epigrams*, of which 14 books exist; one of these, entitled *De Spectaculis*, is of special archæological interest.

S. J. FRONTINUS, *Curator of the Aqueducts* under Trajan. Wrote *De Aquæductibus Romæ*. See page 451.

AULUS GELLIUS, *Roman Essayist:* c. 117–180 A.D. Wrote *Noctes Atticæ*, in which are many notes on Roman antiquities.

DION CASSIUS COCCEIANUS, *Roman Senator and Historian:* b. c. 155 A.D. —date of death unknown. Wrote a *History of Rome* down to the reign of Caracalla, only parts of which now exist; it is of very great value.

APPIANUS, *Greek Historian* of Rome: second century A.D. Wrote a *History of Rome*, of which books xiii. to xxi., τὰ Ἐμφύλια, on the Civil War between Marius and Sulla, are of special value.

Q. SEPTIMIUS TERTULLIANUS—The earliest of the Latin Fathers, c. 160 –c. 220 A.D. Wrote a tract called *De Spectaculis*, on the wickedness of the cruel shows in amphitheatres, which contains some information on the details of the games.

HERODIANUS, *Greek Historian* of Rome: c. 180–240 A.D. Wrote the *History of his own Time.*

The biographies of the Roman Emperors from Hadrian A.D. 117 to Carinus A.D. 284, entitled *Historiæ Augustæ*, were the work of six writers, *Ælius Spartianus, Julius Capitolinus, Vulcatius Gallicanus, Ælius Lampridius, Trebellius Pollio*, and *Flavius Vopiscus*, but it is impossible to attribute with certainty each biography to its real author. This work was compiled at different times towards the end of the third and beginning of the fourth century.

C. JUNIUS SOLINUS, *Roman Historian and Archæologist:* third century A.D. Wrote *Polyhistor*, a sort of Encyclopædia.

CALPURNIUS SICULUS, *Roman Poet:* date very doubtful, usually said to be of the third century A.D. Wrote *Eclogues*, in which he describes shows in a Roman amphitheatre with much detail and vividness.

SEX. AURELIUS VICTOR, *Roman Historian:* fourth century A.D. Wrote *Lives of the Emperors and Illustrious Romans*, and perhaps the *Origo Gentis Romanæ*.[1]

EUSEBIUS OF CÆSAREA: c. 264–c. 340 A.D. Wrote *Historia Ecclesiastica* and the *Chronicon*.

EUTROPIUS, *Roman Historian:* fourth century A.D. Wrote a *Compendium of Roman History* in 10 books, from Romulus to Valens.

AMMIANUS MARCELLINUS, *Roman Historian:* second half of fourth century A.D. Wrote *History of Rome* from Nerva A.D. 96 to Valens A.D. 378.

AURELIUS THEODOSIUS MACROBIUS, *Roman Writer*, first half of fifth century A.D. Wrote *Saturnaliorum Conviviorum, Libri VII.*, an interesting archæological work.

CLAUDIUS CLAUDIANUS, the last *Roman Poet:* d. c. 408 A.D. Wrote *De Bello Getico* on Stilicho's victories over the Goths, and many other poems.

SIDONIUS APOLLINARIS, a *Latin Bishop*, 430–482 A.D. Wrote *Poems* and *Epistles*.

ZOSIMUS, *Greek Historian:* fifth century A.D. Wrote a *History of the Decline of the Roman Empire*, in six books, down to A.D. 410.

MAGNUS AURELIUS CASSIODORUS, *Roman Statesman and Writer:* b. c. 468—d. c. 564. Wrote a *Chronicon* or *Abstract of Universal History*, an *Ecclesiastical History*, and many other works. He also compiled a series of contemporary State papers.

PROCOPIUS, *Byzantine Historian:* b. c. 500. Wrote a *History of his own Time*, a work of great merit, containing an account of the wars of the Romans with the Persians, the Goths, and the Vandals.

II. INSCRIPTIONS.

These are frequently of the highest value in throwing light on Roman topography.

The most important existing inscription, as regards this subject, is that cut on the walls of the Temple of Augustus at Ancyra, an account of which is given at page 247.

[1] The *Publius Victor* and the *Regionary Catalogue*, of which he is supposed to have been the author, are inventions of some mediæval antiquary.

The *Consular Fasti*, inscribed on marble slabs, contained a list of consuls and other state officials down to the time of Augustus. In the sixteenth century many fragments of this valuable record were found near the Temple of Vesta, and are now preserved in the Palazzo dei Conservatori on the Capitol. It appears probable that these were originally preserved in the *Regia*, and after its destruction in the *House of the Vestals*. See Fea, *Frammenti di Fasti*, Rome, 1820; and Reber, *Ruinen Roms*, p. 135.

The Ancyræan inscription, *Res gestæ Augusti*, has been edited by Zumpt, Berlin, 1845; and by Mommsen in 1883.

Other inscriptions are published by—

Gruter, *Inscriptiones Antiquæ Romanæ.*
Muratori, *Thesaurus veterum inscriptionum*, Milan, 1739.
Orelli and Henzen, *Inscriptionum latinarum collectio*, 1828-56.
Zumpt, *Commentationum Epigraphicarum volumen*, Berlin, 1850.
Mommsen and others, *Corpus Inscriptionum Latinarum*, 1863—in progress; and its Supplement, *Ephemeris Epigraphica*, 1872—in progress.

Coins and Medallions.

The coins of Rome contain an immense number of records relating to the buildings of the city. The *reverses* of the *denarii* of the later Republic, after about 150 B.C., are very rich in this way. Under the Empire coins of all denominations very frequently have reverses with representations of buildings erected or restored by the emperors. These, as a rule, are treated in a conventional way—the number of the columns of the front is often reduced for want of space; thus *hexastyle* temples are commonly shown as *tetrastyle*, and the statue of the god which was within the *cella* is often shown between the columns of the portico. The coins may, however, be trusted to give the general design of the buildings they commemorate, and some are treated with much minuteness and accuracy, showing not only the form of the Temple but even the details and arrangement of its sculptured decorations.

The large bronze medallions of the Empire are even richer than the current coins in carefully executed representations of the buildings and sculpture of Rome, and were frequently struck to commemorate the completion of some important architectural work. The chief examples which relate to this class of subject begin with the reign of Antoninus Pius, and continue till about the middle of the third century.

Many coins and medallions on which Roman buildings are represented are illustrated by Canina in his *Indicazione*, 1830, and by Donaldson, *Architectura Numismatica*, London, 1859; neither set of drawings are remarkable for accuracy. Cohen's works on Roman coins of the Republic and Empire; Froehner, *Medaillons de l'Empire*, Paris, 1878; and Grueber, *Roman Medallions*, British Museum, 1872, are all well and accurately illustrated.

III. Uhlrich, in his *Codex Urbis Romæ Topographicus*, Wurtzburg, 1871, has published the *Regionary Catalogues*, called the *Notitia* and *Curiosum*, which were compiled in the fourth century, giving lists of the chief buildings and monuments in each of the *regiones* of Augustus.

In the same work are printed the catalogue of the pseudo-Publius Victor, and the itinerary of the *Einseidlen MS.*, so called from its being preserved in the monastery of Einseidlen in Switzerland; it was written by an unknown visitor to Rome in the ninth century.

Also the *Mirabilia Urbis Romæ*, a twelfth century account of the marvels of the sacred city.

The *Graphia Aureæ Urbis Romæ*, a somewhat similar list, dating from the thirteenth century, is included in this *Codex*.

In the same valuable compilation are included many other extracts from mediæval sources which relate to Roman antiquities.

Preller, *Regionen der Stadt Rom*, Jena, 1846, also gives the

Regionary Catalogues, which are printed in the works of Nardini, Jordan, and other antiquaries; see below.

The *Mirabilia* has also been edited by Parthey, Berlin, 1869; and the *Einseidlen MS.* by Haenel, *Archiv. für Philologie*, Berlin, 1837, v. 115.

The best edition of FESTUS is that of Müller, *Pauli Diaconi excerpta ex libro Pomp. Festi*, Leipsic, 1839.

Much information about Roman Antiquities is given by the various commentators on Virgil, who pass under the general name of SERVIUS, a grammarian of the fifth century. An excellent edition is that published by Thilo and Hagen, Leipsic, 1881–5.

Other early Scholiasts give valuable topographical notes, especially some commentaries on Cicero's works, written probably in the fifth century, but which have been wrongly ascribed to Asconius, a Roman writer of the first century A.D.

V. EARLY WORKS ON ROMAN ANTIQUITIES.

The revival of interest in classical archæology, which naturally accompanied the revival of classical learning, began to dawn in Rome about the middle of the fifteenth century.

The antiquarian works which were produced at this early time, and for long after, are not of course remarkable for finished scholarship or power of accurate and critical research, but are frequently of the greatest value to the modern student both for their accounts of discoveries which were made, and would otherwise have been forgotten, and also for their numerous illustrations of buildings which have now either wholly or in part disappeared.

The Florentine Poggio and the Venetian Biondo were the first of that throng of students of pagan remains which in the succeeding century became so large. Poggio's work, *De Fortunæ Varietate*, written about A.D. 1440, and dedicated by

him to Eugenius IV., contains an interesting account of the ruins of Rome in his time. His MS. was printed at Basle in 1538, and several other editions appeared within a few years. Biondo's *Rome Restored*, was written about the same time. The great outburst of enthusiasm on this subject did not, however, occur till the beginning of the sixteenth century, in the Pontificate of Julius II., when fresh impulse was given to study of the classical remains of Rome by the discovery of the buried chambers of Nero's *Golden House*, under the *Thermæ of Titus*, with their rich store of decorations in colour and stucco reliefs. These at once became not only objects of interest to the antiquary, but also were copied and imitated by countless sculptors and painters, especially by Raphael and his numerous pupils, who reproduced them with varying degrees of imitation or originality on the walls and vaults of most of the magnificent palaces which sprang up with such wonderful rapidity during the first quarter of the sixteenth century.

The *loggie* and the bath-room of Cardinal Bibiena in the Vatican, the chamber of Clement VII. in the Castle of S. Angelo, and, most magnificent of all, the Villa Madama on the slopes of Monte Mario, built for Cardinal de' Medici (afterwards Clement VII.), are among the chief existing examples of the result of this study of classical methods of decoration by Raphael and his school.[1]

Nor was the influence of ancient Rome confined to methods of decoration; the thoroughly pagan spirit of the sixteenth century brought with it a taste for the scholastic formalism of Roman architecture, and hence every important architect of that time measured and drew the then existing remains of ancient Rome as one of the chief parts of his professional training.

This has fortunately preserved to us a large number of

[1] Another splendid example, rather later in date, is the Villa of Pope Julius, built by Vignola, near Monte Parioli, a short way outside the Porta del Popolo.

drawings, from now destroyed buildings, by the hands of Raphael, Bramante, Bramantino, Baldassare and Sallustio Peruzzi, Andrea Sansovino, Palladio, Vignola, and many other great architects of the sixteenth century.

Raphael's zeal as an archæologist, not only in making drawings of ancient buildings but also in taking energetic measures for their preservation, is strongly shown by a report which he wrote to Leo X., describing the wholesale destruction that had been going on in Rome, and pleading for assistance from the Pope to prevent further injury.[1]

Some of these drawings by sixteenth-century architects exist only in MS., preserved in the libraries of the Vatican, the Uffizi, Siena, Milan, and elsewhere. A valuable MS. by Ligorio exists in the Bodleian at Oxford. Some few have been recently published in facsimile. Palladio's very valuable work on the *Thermæ of Rome* is well illustrated by plans, which show far more than now exists—some, such as the Thermæ of Constantine, having almost wholly disappeared; this was first published in London in 1732.

Paintings, especially those of the fifteenth and sixteenth centuries, often give representations of the remains of ancient Rome, supplying much that is now lost. These are frequently overlooked, as they are scattered about in various churches and palaces, and are usually of but little artistic value; moreover, the valuable bit of information which a painting supplies is often merely put in as an accidental accessory or background, and may easily be overlooked. All old pictures should, however, be examined by the student with this object in view. Among the most notable examples are the frescos in the library of the Vatican, painted for Sixtus V.; those by Vasari in the Palazzo della Cancelleria; frescos in the Carafa Chapel in S. Maria Maggiore, and those in S. Martino ai

[1] This was published by Visconti, *Lettera sull'Antichità di Roma . . . da Raffaello*, etc., Rome, 1834; see also Müntz, *Gaz. des B. Arts*, Oct. and Nov. 1880.

Monti. The ancient monuments shown on the bronze door of S. Peter's are mentioned at page 435.

One of the most important pictures to the student of Roman Archæology is a large bird's eye view of Rome, painted in oil in the sixteenth century, which shows all the then existing monuments of Rome with some minuteness. This has been published by De Rossi, in a work which contains much that is interesting of the same sort—*Piante di Roma anteriori al Secolo XVI.*, Rome, 1879. See also Müntz, *Un plan de Rome, au XVme Siècle, Soc. Nat. des Antiquaires*, Paris, April 1880.

List of Works on the Archæology of Rome.[1]

Works of the Fifteenth and Sixteenth Centuries.

Biondo, *Roma Ristaurata*, MS. of 1430–40, printed at Venice in 1543.
Poggio, *De Fortunæ Varietate*, MS. of about 1440, printed at Basle in 1538.
Bramantino, *Rovine di Roma*, 1503–1513, with many sketches, printed by Mongeri, Milan, 1875, from the original MS. in the Ambrosian Library at Milan.
Albertini, *Opusculum de Mirabilibus Urbis Romæ*, 1509.
Pomponius, *De Vetustate Urbis Romæ*, 1523.
Andrea Fulvio, *Antiquaria Urbis Romæ*, Venice, 1527.
Calvus, *Antiquæ Urbis Romæ Simulachrum*, 1532.
Marlianus, *Urbis Romæ Topographia*, 1544.
Palladio, *L'Architettura*, Venice, 1542; and *Le Terme dei Romani* London, 1732.
Serlio, *L'Architettura*, Venice, 1545; *lib.* iii. deals with the buildings of ancient Rome.
Fauno, *Antichità di Roma*, 1548.
Pomp. Leto, *Antichità di Roma*, Venice, 1550.
Labacco, *Architettura ed Antichità di Roma*, 1557; a careful and well illustrated work, which has been much used by later antiquaries.
L. Mauro, *Antichità di Roma*, Venice, 1558.
Ligorio, *Effigies Antiquæ Romæ*, 1561.
Gamucci, *Antichità di Roma*, Venice, 1565.

[1] All these books are printed in Rome unless otherwise described. Other works on special sections are mentioned in the text under their respective headings—Baths, Amphitheatres, etc.

Du Perac, *Vestigj di Roma*, 1575; this very valuable series of etched plates shows an immense quantity of what is now lost. The drawings appear to have been made about the middle of the century, though not published till 1575.

Fabricius, *Romæ Antiquitates*, 1587.

Vacca, *Memorie di varie Antichità*, 1594; printed in Nardini, *Roma Ant.*, Ed. Nibby, vol. iv.

Works of the Seventeenth Century.

Crechi, *Antichità di Roma*, 1601.

Laurus, *Antiquæ Urbis Splendor*, 1612.

Maggius, *Ædificia et Ruinæ Romæ*, 1618; a set of etchings.

Felini, *Alma Città di Roma*, 1625.

Scamozzi, *L'Antichità di Roma*, 1632.

Franzini, *Roma Antica e Moderna*, 1653.

Desgodetz, *Edifices Antiques de Rome*, 1682; a valuable collection of measured plans and details.

Ciampini, *Vetera Monumenta*, 1690.

Bartoli, *Admiranda Romæ Vestigia*, 1693.

De Rubeis, *Romæ Magnificentiæ Monumenta*, 1699.

Works of the Eighteenth Century.

Pinarole, *Antichità di Roma*, 1709, and *Vestigi di Roma*, 1744.

Donatus, *Roma Vetus*, 1725.

Piranesi's large and skilfully executed etchings are now of great interest for their record of buildings which have since been injured or destroyed. They are grouped in Atlas folio volumes, entitled *La Magnificenza dei Romani*, 1761–4, *L'Antichità Romana*, 1756, and other works.[1]

Bellori, *Ichnographia Veteris Romæ*, 1764.

Venuti, *Vetera Monumenta*, 1778; and *Descrizione Topographica di Roma*, 1824.

Guattani, *Monumenta Antiqua*, 1784–1789, and *Roma Descritta*, 1805.

Works of the Nineteenth Century (in addition to those named at page xxv).

Valadier, *Le piu insigni Fabbriche di Roma*, 1810–26.

Rossini, *Antichità di Roma*, 1817.

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[1] Piranesi's copper plates, though much retouched, are preserved, and still printed from at the *Calcografia Camerale* of Rome; they are sold, either in sets or singly, at three lire each. The *Calcografia* also possesses the coppers of many other valuable old plates of Roman antiquities.

Fea, *Ragionamento*, and other works, 1821–33.
Taylor and Cressy, *Architectural Antiquities of Rome*, London, 1821.
Romanis, *Vestigie di Roma Antica*, 1832.
Gell, *Topography of Rome*, London, 1834.
Donovan, *Rome, Ancient and Modern*, 1842.
Becker, *Die Römische Topographie*, Leipsic, 1844.
Zestermann, *De Basilicis*, Brussels, 1847.
Braun, *Die Ruinen und Museen Roms*, Berlin, 1854.
Ampère, *Histoire Romaine*, Paris, 1862–4.
Zinzow, *Das älteste Rom*, Pyritz, 1866.
Parker, *Photographs*, illustrating the Archæology of Rome; a very valuable set, price half a franc each.[1]
Friedländer, *Sittengeschichte Roms*, Leipsic, 1869; and *Darstellungen aus der Sittenges. Roms*, Leipsic, 1881.
Wey, *Description de Rome*, Paris, 1870.
Gsell-Fels, *Romische Ausgrabungen*, Hildburghausen, 1870.
Jordan, *Forma Urbis Romæ*, Berlin, 1875, with supplement of 1883; *Novæ Questiones Topographicæ*, Königsberg, 1868; and other works mentioned below.
Lanciani, *Dissertazioni Archæologiche*, 1876–85, and other works on the *Aqueducts*, *Vestals*, *Curia*, etc.
De Rossi, *Note di Topografia Romana*, 1882.
Duruy, *Histoire des Romains*, Paris, 1878–84; well illustrated.
Dyer, *The City of Rome*, new ed., 1883.
Maps—Nolli's *Map of Ancient Rome*, 1748, has been largely followed by Canina in his large and fanciful plan of Rome in many plates, published in 1850.
Moltke, *Carta Topographica di Roma*, Berlin, 1852.
Rieu, *Romæ veteris ychnographia*, Lyons, 1863.
Burn, *Rome and the Campagna*, London, 1871, gives a good map of ancient Rome.

Works on the Museums and Sculpture of Rome.

Pistolesi, *Il Vaticano*, 1829-38.
Visconti, *Museo Chiaramonti*, *Pio Clementino*, and *Museo Gregoriano*, 1803–43.
Bottari, *Museo Capitolino*, Milan, 1821–2.

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[1] All students of Roman archæology owe a great debt of gratitude to Mr. J. H. Parker for this large and well selected set of photographs; unhappily, his numerous writings on this subject are rendered worse than useless to the student by their countless inaccuracies and baseless theories.

S. Q. Visconti, *Sculture della Villa Borghese*, 1796, and *Sculture del Pal. Giustiniani*, 1811.
Winckelmann, *Opere di*, best edition is in Italian, Ed. Fea, Prato, 1830.
Vitale, *Marmi nel Pal. Torlonia*, n.d.
Benndorf, *Die Bildwerke des Lateran Museum*, Leipsic, 1867.
Wolff, *Bildwerke des Vaticans*, etc., Berlin, 1870.
Schreiber, *Antiken Bildwerke der Villa Ludovisi*, Leipsic, 1880.
De Montault, *Musees et Galeries de Rome*, 1880.
Matz and Von Duhn, *Antike Bildwerke in Rom*, Leipsic, 1881.
Bernoulli, *Romische Ikonographie*, Stuttgard, 1881.
See also Overbeck, *Geschichte der griechischen Plastik*, new ed., Leipsic, 1882, vol. ii.

Some of the most valuable information on Roman archæology, and especially accounts of the recent discoveries, are contained in the following periodicals :—

The *Annali, Bulletino*, and *Monumenti dell' Instituto di Corrispondenza Archæologica di Roma*, 1829—in progress.
Atti dell' Accademia Romana dei Lincei—in progress.
Bulletino della Commissione Archæologica Municipale di Roma, 1872—in progress.
Notizie degli Scavi, 1876—in progress.

The *Monografia di Roma*, 1878, by various writers, gives a list of works on Rome down to 1876, and contains valuable articles on the health, population, etc., of ancient Rome. See also Bonghi, *Bibliografia Storica di Roma Antica*, 1879.

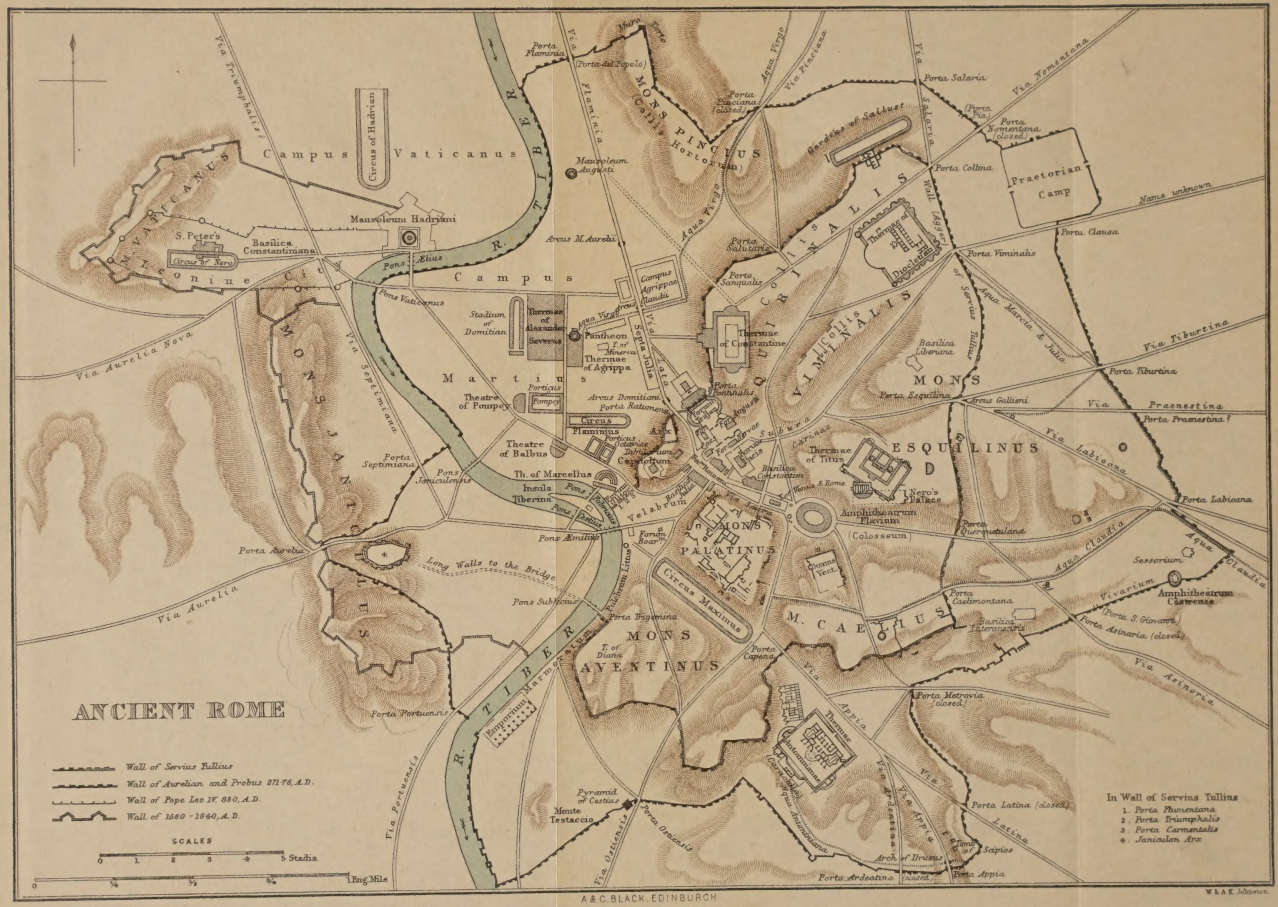
The reader who wishes to study the subject of Roman archæology in a fairly concise form, and without immediate reference to original sources, will find the following books the most useful :—

Nardini, *Roma Antica*, Ed. Nibby, 1818–20.
Nibby, *Antichità di Roma*, 1830, and *Roma nell' Anno*, 1838.
Becker, *Handbuch der Romischen Alterthümer*, Leipsic, 1843 ; of special value from its numerous references to classical writers.
Bunsen and others, *Beschreibung der Stadt Rom*, Stuttgard, 1829–42 ; and its abridgment by Plattner and Uhlrichs, 1844.
Reber, *Die Ruinen Roms*, Leipsic, 1863.
Von Reumont, *Geschichte der Stadt Rom*, Berlin, 1867–70.

Jordan, *Topographie der Stadt Rom*, Berlin, 1878—in progress, a very useful work.

Burn, *Rome and the Campagna*, London, 1871; this is by far the best work in English.

The large and magnificently illustrated works by Canina must be used with great caution; they contain highly imaginative restorations, often invented without a shadow of evidence. Even those parts of the drawings which profess to show the existing remains are rendered of little value by their numerous inaccuracies. The chief of Canina's works are *Indicazione di Roma Antica*, 1830; *Esposizione Topografica*, 1842; *Edifizj di Roma Antica*, 1848–56; *Foro Romano*, 1845; and *Architettura Antica*, 1834–44.



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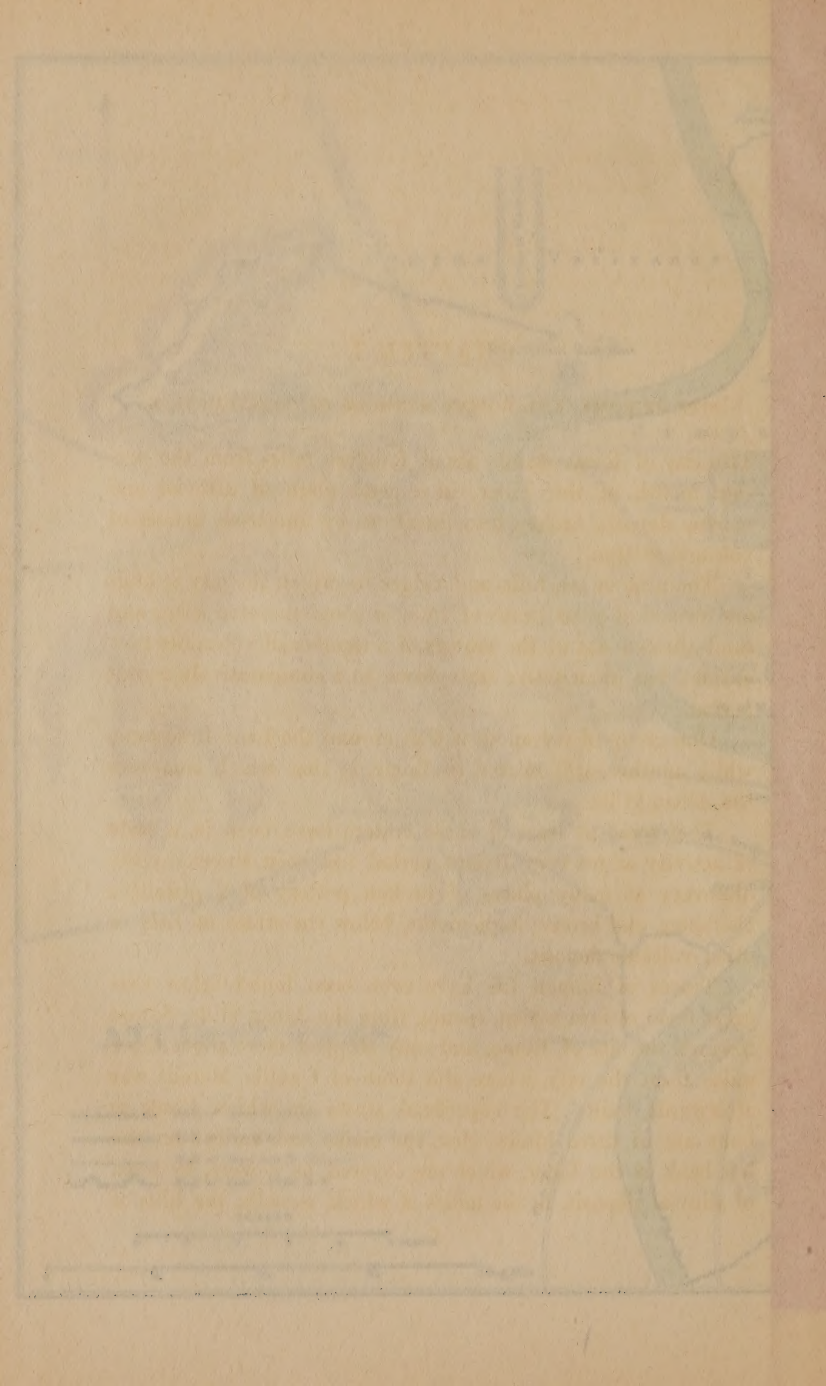

CHAPTER I.

SITE OF ROME, AND ROMAN METHODS OF CONSTRUCTION.

THE city of Rome stands about fourteen miles from the present mouth of the Tiber, in a great plain of alluvial and marine deposit, broken into elevations by numerous masses of volcanic matter.

The nine or ten hills and ridges on which the city is built are formed of great heaps of tufa, or conglomerated ashes and sand thrown out of the craters of a number of volcanoes now extinct, but in an active state down to a comparatively recent period.

One group of volcanoes is that around the Lago Bracciano, while another, still nearer to Rome, is that which composes the Alban Hills.

That some at least of these craters have been in a state of activity at no very distant period has been shown by the discovery at many places of broken pottery of a primitive character, and bronze implements, below the strata of tufa or other volcanic deposit.

Traces of human life have even been found below that great flood of lava which, issuing from the Alban Hills, flowed towards the site of Rome, and only stopped short about three miles from the city, where the tomb of Cæcilia Metella was afterwards built. The superficial strata on which Rome is built are of three kinds—*first*, the plains and valleys on the left bank of the Tiber, which are covered, as it were, by a sea of alluvial deposit, in the midst of which, *secondly*, the hills of

volcanic origin rise like so many islands; and *thirdly*, on the right bank of the Tiber, around the Janiculan and Vatican Hills, are extensive remains of an ancient seabeach, conspicuous in parts by its fine golden sand and its deposit of pure grayish-white potters' clay. From its yellow sand the Janiculan Hill has been sometimes known as the *Golden Mount*, a name which survives in the title of the church at its summit, called *S. Pietro in Montorio* (*monte d'oro*).

In addition to these chief deposits, at a few places, especially on the Aventine and Pincian Hills, under-strata of travertine crop out; this is a hard limestone rock, once in solution in running water, and deposited gradually, as the water by exposure to air loses its carbonic acid solvent—a process still rapidly going on at Terni, Tivoli, and other places in the neighbourhood along the course of the river Anio.

The conditions under which the tufa hills were formed have been very various, as is clearly seen by an examination of the rock at different places. The volcanic ashes and sand, of which the tufa is composed, appear in parts to lie just as they were showered down from the crater; in that case the tufa shows but little or no sign of stratification, and consists wholly of igneous products.

In parts time and pressure have bound together these *scoriæ* into a soft and friable rock; in other places it still lies in loose sandy beds, which can be dug out with the spade.

Other masses of tufa, again, show signs either of having been deposited in water or else washed away from their first resting-place and redeposited elsewhere with visible marks of stratification. This is shown by the water-worn pebbles and chips of limestone rock which form a conglomerate, bound together by the volcanic ashes into a sort of natural cement.

A third variety is that of which the Palatine Hill is composed. Here the shower of red-hot ashes has evidently fallen on a thickly-growing forest, the burning wood of which, partly

smothered by the ashes, has been converted into charcoal, large lumps of which are embedded in the tufa rock.

In some places charred branches of trees, their form and structure well preserved, can be easily distinguished. The so-called *Wall of Romulus*, and some others of the prehistoric buildings of the Palatine, are built of this curious conglomerate of tufa and charcoal. At one point—by the north side of the *Scalæ Caci*—a very perfect section of the branch of a tree is visible on the face of one of the massive tufa blocks.

So great have been the physical changes in the site of Rome since the first dawn of the historic period that it is very difficult now to realise what its aspect once was.

The *Forum Magnum*, the *Velabrum*, the great *Campus Martius* (now the most crowded part of modern Rome), and other valleys, were once almost impassable marshes and pools of water—

> "*Hic, ubi nunc Fora sunt, udæ tenuere paludes.*"
>
> Ov. *Fast.* vi. 401.

And Dionysius (ii. 50) speaks of the site of the Forum having formerly been a marshy thicket—*διὰ τὸ κοίλον εἶναι τὸ χωρίον*. The draining of these valleys was effected by means of the great *Cloacæ*, which were among the very earliest important architectural works of Rome; as Varro says (*Lin. Lat.* iv. 149), ". . . *lacum Curtium in locum palustrem, qui tum fuit in Foro, antequam Cloacæ factæ sunt.*"

Moreover, the various hills and ridges of Rome were once more numerous and very much more abrupt than they are now. At an early period, when each hill was crowned by a separate village-fort, surrounded by hostile tribes, the great object of the inhabitants was to increase the natural steepness of the cliff, and so render access more difficult and defence easier. In later years, when the various villages and races which formed the city of Rome were united under one government, and the whole group of hills was surrounded by one extensive circuit wall, the very physical peculiarities which had

originally made its hills so populous through their natural adaptability for defence became extremely inconvenient in a united city, where architectural symmetry and splendour were above all things aimed at. Hence the most gigantic engineering works were carried out, with the object of as much as possible obliterating the natural unevenness of the site. Tops of hills were levelled, whole ridges cut away, and gentle slopes formed in the place of abrupt cliffs. The levelling of the *Velia* and the excavation of the site for Trajan's Forum are instances of this.

This work continued in the Middle Ages, as when in the fourteenth century an access was made to the Capitoline Hill from the side of the *Campus Martius*,[1] where up to that time a steep cliff had prevented all approach except from the side of the *Forum Magnum*.

Under the present government an even more extensive plan, called the *Piano regolatore*, is being gradually carried out, with the object of reducing hills and valleys to one level, on which wide boulevards are being constructed on a formal plan, regardless of the ancient topography of the city. The constant fires which have devastated Rome have been an important agent in obliterating the natural contour of the ground. The accumulated rubbish from these and other causes have in some places covered the ancient levels to the depth of as much as 40 feet, especially at the bottom of the valleys.

Building Materials employed in Rome.

The rapid growth and stability of Rome were very largely due to the richness of its site and the immediate neighbourhood in a variety of excellent building materials, including several kinds of stone, and the different ingredients of the most durable concrete, cements, and mortar that have ever been produced.

[1] This approach was made by building the great flight of steps up to the church of Ara Cœli.

The following is a list of the principal materials used in the building of ancient Rome :—

I. *Tufa*, the *ruber et niger tophus* of Vitruvius, ii. 7. This was the only stone used during the early prehistoric period of Rome. Its manner of formation has been described above. It varies in colour from a dark brown, often reddish tint, to a light yellow; and in density from a deposit that can be cut with the spade to a firmly concreted mass about as hard as English Bath stone. It is usually a very bad "weather-stone," but the harder varieties are of ample strength for building purposes when protected from frost and wet. A simple coating of stucco was sufficient to protect exterior walls of tufa, and even in the earliest times it was probably never used externally without this protection. Vitruvius, ii. 7, advises that tufa should be quarried in the summer, and allowed two years to season before being used;[1] and Pliny (*Hist. Nat.* xxxvi. 48) copies his remarks.[2] Quarries of tufa are mentioned by Strabo (lib. v.), as existing on the banks of the Anio, near the quarries of *travertine* and *peperino*.

Every hill in Rome consists mainly of tufa, and the materials for the early buildings appear usually to have been quarried on the spot. The quarries in the Aventine supplied the hardest kind.

II. *Lapis Albanus*, so called from its quarries in the Alban Hills, still worked at Albano and Marino. This also is of volcanic origin, and is a conglomerate of ashes, gravel, and other fragments of stone, all cemented together into a dense

[1] What stone-masons call the "sap" in stone should always be allowed to dry out before it is used; otherwise, frost and damp rapidly cause it to flake or split. When once the "sap" is got rid off the stone can be soaked with wet without harm, very much like the necessity of drying out the sap in timber.

[2] All the parts of Pliny's *Historia Naturalis* which relate to practical matters of construction appear to be taken from Vitruvius, and are incorporated by Pliny without acknowledgment of their source.

mass. It is a moderately good weather-stone and is quite fire-proof. Its modern name is *Peperino*, so called from the black *scoriæ*, like pepper-corns, which stud the stone. It is dark brown in colour, and is harder than the hardest kinds of tufa. It is used in parts of the Servian wall, and at the exit of the *Cloaca Maxima*.

III. *Lapis Gabinus* (also called *Peperino*) is a variety of the same stone found at Gabii, near the modern Lago di Castiglione. It is similar in formation to the Alban stone, but contains less mica; is harder, and stands the weather much better. It contains broken fragments of lava, the product of some earlier eruption; the lumps vary in size from about 2 to 12 inches across.

The *Tabularium* is faced with this stone, the inner walls being of tufa (see p. 240). In the lofty circuit wall round the Forum of Augustus both the Alban and Gabine stones are used, and their different powers of resisting decay can be readily compared. The lower part of the wall is of Gabine stone, and is as fresh and sharp as ever; while the upper story of Alban stone shows considerable signs of surface decay.

The fire-resisting qualities of the *lapis Gabinus* are mentioned by Tacitus (*Ann.* xv. 43); and on account of this the building Act of Nero, enacted after the great fire, required it to be used for the fronts of houses in the streets of Rome, in order to prevent the recurrence of so wholesale a conflagration.

IV. *Lapis Tiburtinus* (modern *travertine*), so called from its chief quarries at Tibur (Tivoli), Vitr. ii. 7. It is a pure carbonate of lime, very hard, of a beautiful creamy colour, which weathers into a rich golden tint; it is a deposit from running water, and is formed in a highly stratified state, with frequent cavities and fissures, lined with crystallised carbonate of lime. In it are frequently embedded bits of stick and leaves. Great beds of it exist all along the river Anio and other streams.

The hill just outside the Porta del Popolo, called *Monte*

Parioli, is composed of a coarse variety of travertine. As Vitruvius remarks, it is an excellent weather-stone, but is easily calcined by fire.[1] If laid on its natural bed it is very strong, but if set upright its crystalline beds are a great source of weakness, and it splits into *laminæ* from end to end. Neglect on the part of Roman masons of this important precaution frequently caused serious failures to occur in their buildings. This was notably the case in the *Rostra* (see p. 159).

The exterior of the Colosseum is the most conspicuous example of the use of travertine.

V. *Silex* (modern *selce*); this has no relation to what is now called *silex* or flint, but is simply *lava*, poured out from the now extinct volcanoes near Rome.

One great stream has very conveniently brought this useful material to within three miles of Rome; the tomb of Cæcilia Metella stands on its very edge. It was used in great quantities for the paving of roads, and when broken into pieces and mixed with lime and pozzolana formed the hardest and most durable kind of concrete. It is dark gray in colour, very hard, and breaks with a slightly conchoidal fracture. (See Pliny, *Hist. Nat.* xxxvi. 29; and Vitr. ii. 7.)

VI. *Pulvis Puteolanus* (modern *pozzolana*), so called from its bed at Puteoli, near Naples. It also exists in enormous quantities under and all round the city of Rome, lying in thick strata just as it was showered down out of the neighbouring volcanoes. It is a chocolate red in colour,[2] and resembles a sandy earth mixed with larger lumps about the size of coarse gravel. When mixed with lime it forms a very

[1] This stone when burnt produces most excellent lime, and contributed greatly to the wonderful durability of the Roman concrete, cements, and mortar. (See Vitr. ii. 5.)

[2] An inferior sort is brown; the better red quality was nearly always used till the third century A.D. After which the brown pozzolana was very frequently used.

strong *hydraulic* cement—having the power, that is, of setting hard even under water. This peculiarity is mentioned by Vitruvius,[1] who devotes cap. vi. of lib. ii. to this very important material, to which is mainly due the immense strength and durability of the Roman concrete and cements in walls, vaults, and floors.

The *pozzolana*, more than any other material, contributed to make Rome the proverbially "eternal city"; without it a domed building like the *Pantheon* would have been impossible, as would also the immense vaulted *Thermæ*, and a basilica such as that of Constantine.

VII. Excellent sand (*arena*) and gravel (*glarea*) abound in and near Rome, and also contributed to the strength of the Roman mortar and cement. Vitruvius' remarks on sand are very sensible (see lib. ii. 4); he mentions the three kinds of sand—*arenæ fossitiæ* (pit-sand) being the best, and *arena de fluminibus* (river-sand) next best. *Arenæ marinæ* (sea-sand) is to be avoided on account of the salt it contains efflorescing out from the mortar or stucco. The best sort of sand is known, he says, by its crackling when rubbed in the hand, and by its not staining a white dress—thus showing that it is both sharp and clean. No sand could be purer or better for building purposes than the golden pit-sand of the Janiculan Hill; while that which is deposited by the Tiber is not free from muddy impurities.

VIII. *Bricks* (*lateres*) were of two sorts—*crudi*, or sun-dried, and *cocti*, or kiln-baked. The remarks of Vitruvius, ii. 3, seem to refer almost wholly to the *lateres crudi*, and he never mentions the triangular bricks which were used in all the existing Roman walls which have brick facings.

In the time of Vitruvius (reign of Augustus) and earlier, little but unburnt brick was used, and of these none remain.

The existing examples of bricks in Rome are used

[1] "Etiam moles quæ construuntur in mare sub aqua solidescunt." (Vitr. ii. 6.)

merely as facing to concrete walls; no wall is ever of solid brick.[1] These facing bricks are equilateral triangles, varying in length from 4 to 14 inches.

The facings of arches are nearly always made with large square tiles, about 2 Roman feet square,[2] the *tegulæ bipedales* of Vitruvius. These are usually cut into three or four pieces so as only to tail a few inches into the concrete arch which they hide; at intervals in each arch a few of the complete squares are introduced to improve the bond.

Tiles 12, 14, and 18 inches square also occur, but are less common: and there are also the small squares of only 8 or 9 inches, which were used specially for the *pilæ* or short pillars of *hypocausts*, and also for laying over the wooden centering into which the fluid concrete to form vaults was poured. The bricks in Roman buildings are of many colours —red, yellow, and more rarely brown; they are nearly always well burnt, and comprise a great many varieties of clays.

In some of the bricks, and frequently in those of best quality, a quantity of the red pozzolana has been worked up with the clay, probably to prevent warping.[3] A great many varieties of brick occur frequently in the same building; this is specially the case in part of Nero's Golden House, under the Thermæ of Titus.

The stamps which occur on the bricks of buildings in Rome are of great value in determining the dates of various structures. Though in other places in Italy brick stamps occur as early as the middle of the first century B.C., yet in Rome

[1] Even walls which are only 7 inches thick are not built of solid brick, but are of concrete, faced with very small brick triangles.

[2] They really are rather less than that, probably owing to shrinkage in firing; they average about 1 foot 11 inches square.

[3] This can be seen in many of the bricks in the Flavian Palace on the Palatine, and in the finest bit of brick-facing in Rome, an archway with engaged columns, which has been included in the line of the Aurelian wall near the *Porta Latina*.

the series does not begin till the second century A.D., and continues, though not without interruptions, till *circa* 500 A.D., in the reign of Theodoric. The later ones are usually rectangular, but those of the second and third centuries are nearly always circular, with the inscription in two concentric rings: various names and facts are recorded on these stamps, *e.g.* the names of the consuls, though rarely; of much more frequent occurrence is the name of the owner of the brickfield from whence the clay came, and that of the potter (*figulus*) who made the brick; after his name often comes the phrase *Valeat qui fecit*, "may the maker prosper" (see p. 122).

The words *ex prædis* refer to the estate where the clay was dug; after it comes the name of the owner—very often the emperor. Severus appears to have owned many *prædia*, which supplied the bricks used in his great palace on the Palatine (see p. 130). The potter's name comes after the words *opus doliare* or *opus figlinum*, meaning "clay-work," or else after *ex figlinis* or *ex officina*, meaning "from the pottery" or "manufactory."

An immense number of these brick inscriptions exist, and are being published in the *Corpus Inscrip. Lat.*, Berlin: ed. by Mommsen, Henzen, and others.

Decorative Materials used in Rome.

Marble appears to have come into use about the beginning of the first century B.C. Its introduction, especially into private houses, was at first viewed with great jealousy, as savouring of Greek luxury. The house of the orator Crassus on the Palatine, built about 92 B.C., was the first which had marble columns, namely, six small columns of Hymettian marble in the Atrium. For this he was severely blamed; and the stern republican, M. Brutus (the murderer of Cæsar), nicknamed him the "Palatine Venus" (see Pliny, *Hist. Nat.* xxxvi. 3). A few years later, in 78 B.C., M. Lepidus was the first who used Numidian marble (*giallo antico*); he employed

it not only for columns in his house, but even for thresholds of the doors (Pliny, *Hist. Nat.* xxxvi. 8). L. Lucullus, who was consul in 74 B.C., introduced the black marble that was called after him (see p. 14). Marble wall-linings were first used in a house by a Roman knight named Mamurra, one of Cæsar's officials in Gaul. Pliny states this on the authority of Cornelius Nepos (*Hist. Nat.* xxxvi. 7). In this house were columns of Carystian (cipollino) and Luna marble.

It was, however, considered more excusable in a public building; and the magnificent temporary theatre, built in 58 B.C. by the ædile M. Æmilius Scaurus, had one story of its *scena* of marble, and 360 columns also of Greek marble (see p. 292). In a very few years marble became very common under the rule of Augustus, who did all he could to make Rome splendid, not only by his personal munificence in building theatres, temples, and other buildings, but also by urging and persuading other Roman citizens to follow his example. Suetonius (*Aug.* 29), gives a list of wealthy Romans who were induced by Augustus to embellish the city with magnificent temples and places of amusement, and he remarks that Augustus used to boast that he had found Rome of brick and left it of marble. There was probably much truth in this, if for *brick* we read *peperino* and *tufa*. In the time of Augustus burnt brick had not yet come into general use, and the usual Roman wall-facings of his time were *opus quadratum* of peperino or tufa and *opus reticulatum* of tufa only.

Varieties of Marble used in Rome.

Four chief kinds of white "statuary marble" were used:—

(1) *Marmor Lunense*, from Luna, the modern Carrara (Strabo, lib. v.) It is of many qualities, from the purest white, and a fine sparkling grain like loaf sugar, to the coarser sorts disfigured with bluish-gray streaks.

Example: The eleven Corinthian columns built into the old *Dogana*, near the column of Marcus Aurelius.

(2) *Marmor Hymettium*, from Mount Hymettus, above Athens. This appears to have been the first foreign marble introduced into Rome. It resembles the inferior kinds of Luna marble, being rather coarse in grain and frequently stained with gray striations (Strabo, lib. x.)

Examples: The forty-two columns in the nave of S. Maria Maggiore, and the twenty in S. Pietro in Vincoli.[1]

(3) *Marmor Pentelicum*, from Mount Pentelicus, also above Athens (Pausan. *Attic.* i.) It is fine in grain, and of a pure white; some ancient sculptors, such as Scopas and Praxiteles, preferred it to any other marble (Pausan. *Arcad.* viii.) Its quarries are still largely worked, and the greater part of the hill appears to consist of it. It lies on a bed of schist.

Example: The statue of Augustus in the Vatican.

(4) *Marmor Parium*, from the isle of Paros: a very beautiful marble, though of a strongly crystalline grain; it is slightly translucent. When fractured its crystals catch the light and sparkle brightly; hence it was also called *lychnites*. Pliny (*Hist. Nat.* xxxvi. 4) wrongly explains this name, by saying that its quarries were underground and were worked by lamp-light. This is not the case: the quarries in Mount Marpesius (Strabo, lib. x.) were always worked, as they are now, from the surface. (See Dodwell, *Journey in Greece*, 1740, i. p. 501.)

Examples: Statues of the vestals in the *Atrium Vestæ*.

Other statuary marbles, though to a less degree, were used by the Romans, especially a kind which Pliny (*Hist. Nat.* xxxvi. 28) calls *Porus*. This is possibly the modern *grechetto*, very similar to Parian, but not so crystalline in grain. The Temple of Apollo at Delphi was built of this fine *porus* marble, except the roof tiles, which were of Parian. The torso of Heracles, by Apollonios, in the Vatican, is of this *grechetto*.

Thasian, Lesbian, and Tyrian white marbles were also used in Rome.

[1] These, and all the fine marbles in the churches of Rome (except some in S. Paolo fuori le mura), have been taken from ancient Roman buildings.

Coloured Marbles.

(1) *Marmor Numidicum* (modern *giallo antico*). Pliny (*Hist. Nat.* v. 3) mentions this as being, together with wild beasts for the amphitheatres, the principal export from Numidia and Lybia; from the latter province it was also called *Marmor Lybicum*. It is of a rich golden yellow, deepening in tint to orange and pink. Enormous quantities of it were used in Rome, especially for columns and wall-linings.

Examples: Six large fluted columns in the Pantheon, and seven on Constantine's Arch; the eighth has been taken to the Lateran Basilica. These eight columns originally belonged to the Arch of Trajan.

(2) *Marmor Carystium* (modern *cipollino*), from Carystos, in the Island of Eubœa (Strabo, lib. x.) It is a highly stratified marble, with alternate wavy beds of white and pale green—the "*undosa Carystos*" of Statius (*Sylv.* I. v. 36). It is called *cipollino* from its layers like an onion—*cipolla*.

Example: Columns of the *Temple of Faustina*.

(3) *Marmor Phrygium* or *Sinnadicum* (modern *pavonazetto*), from Sinnada in Phrygia (Strabo, lib. xii.; Juv. xiv. 307; and Tibull. III. iii. 13). A slightly translucent marble, with rich purple markings—violet verging on crimson; according to the legend, it was stained with the blood of Atys (Stat. *Sylv.* I. v. 36).

Example: Twelve fluted columns in the nave of S. Lorenzo fuori le mura, and four large columns in the tribune of S. Paolo fuori le mura.

(4) *Marmor Iasium*, from the island of Iasos; probably the modern *porta santa*, so called because the "holy door" of S. Peter's is framed with this marble. It is mottled with large patches and veins of dull red, green, and brown, with some white.

Examples: The slabs in front of the "*Græcostasis*," and the four altar columns in S. Peter's, in the chapels of the Presentation and of S. Sebastian.

(5) *Marmor Chium*, from the island of Chios, probably the modern "*Africano*." It is similar in markings and colours to the *porta santa* marble, but the tints are more brilliant.

Examples: A great deal of the pavement of the *Basilica Julia*, and two large columns in the façade of S. Peter's.

(6) *Rosso antico*, a Greek marble; its ancient name is unknown. As a rule it does not occur in large pieces, but was much used for small cornices, architraves, and other mouldings in the interiors of buildings. It is hard, very fine in grain, and of a deep red, like blood. It takes a very high polish, and is one of the most richly decorative marbles used in ancient Rome.

Examples: The largest known pieces are the fourteen steps to the high altar of S. Prassede, and two columns, nearly 12 feet high, in the Rospigliosi *Casino dell' Aurora*. During the period of decadence it was occasionally used for sculpture: *examples*, two statues of fauns in the Vatican and Capitoline Museums.

(7) *Nero antico* is probably the ancient *marmor Tænarium*, from Cape Tænarus, in Sparta. It is mentioned by Tibullus (III. iii. 14) in conjunction with the Phrygian and Carystian marbles. (See also Prop. *El.* III. ii.; and Pliny, *Hist. Nat.* xxxvi. 43.)

Examples: Two columns in the choir of the church of Ara Cœli. It is of rare occurrence.

An immense number of other less common marbles, including many varieties of *breccia*, and fossil *madrepores*, have been found in the ruins of Rome; but their ancient names are unknown.

Some of the classical names for marbles, also, cannot be identified—such as the *marmor Luculleum*, from an island in the Nile, but which island Pliny does not say (see *Hist. Nat.* xxxvi. 8). It was so called because it was specially used in Rome by the consul L. Lucullus, about the year 74 B.C.

Another doubtful marble is the *marmor Proconnesium*, from

the island of Proconnesos, with which the celebrated mausoleum of Halicarnassus was decorated. (See Vitr. II. 8; and Pliny, *Hist. Nat.* xxxvi. 6.)

A very rich and beautiful mottled red and white marble, now called "*Fior di Persico*," may possibly be the *marmor Molossium*. A great part of the walls of the magnificent *Corsini Chapel*, in the Lateran Basilica, is lined with it.

Many varieties of the beautiful "precious serpentines" were used by the Romans; these are not *marbles* strictly speaking, not being calcareous stones.

The commonest is the *lapis Atracius* (verde antico), from Atrax on the Peneius in Thessaly (Livy, xxxii. 15). Like *rosso antico* it was mainly used for internal decoration. It has a brilliant green ground, mottled with white and dark brown. It seldom occurs in large pieces, but some columns of it were found by the *Temple of Castor* in the Forum, and are now set on its front flight of steps.

The finest examples in Rome are the twenty-four columns by the niches of the Apostles in the Lateran Basilica. Another variety of "precious serpentine" found in Rome is the *lapis ophites* of Pliny (*Hist. Nat.* xxxv. 11). It is deep green, with markings like the scales of a snake (ὄφις); hence its name. It was found near Thebes.

Example: A fine vase in the Vatican *Galleria dei candelabri.*

Alabaster: The hard Oriental varieties of alabaster are among the most magnificent materials used in ancient Rome.[1] This is the *onyx* or *alabastrites* of Pliny (*Hist. Nat.* xxxvi. 12, and xxxvii. 32). Its chief quarries were in Arabia, in Syria near Damascus, and on the Nile near Thebes; these last quarries have been largely worked in the present century, to supply materials for the facing of the mosque of Mehemet Ali

[1] They are very different from the soft native alabasters of Italy, such as that quarried near Volterra, and much used by the Etruscans for their cinerary urns.

on the citadel of Cairo, and many blocks were imported into Rome for the rebuilding of the Basilica of *S. Paolo fuori le mura.*

In Pliny's time (first century A.D.) it was very rare; he mentions, as an almost miraculous thing, four small columns of "*onyx*" which were placed in the Theatre of Balbus (see p. 299). This precious material had previously been only used for cups and perfume bottles, which were hence called *alabastra.*

In later times it was introduced in larger quantities, and many columns of it have been found in the Baths of Caracalla, on the Palatine, and elsewhere. It is a very beautiful semi-transparent stone, richly marked with concentric nodules and wavy strata, the result of its calcareous matter being usually deposited in the stalactite form.

An immense number of varieties of alabaster have been found in Rome, some almost as transparent as rock crystal and others marked with brilliant red mottlings.

During the second and third centuries the more transparent and richly marked sorts were often used for drapery round the shoulders of marble busts, of which many examples are preserved in the Capitoline Museum. Some of the finest specimens of the red variety are used to line the "font" at the end of the so-called Christian Basilica, by the side of the *Sacra Via* (see p. 141).

Another even more sumptuous material was used in Rome, though it was apparently very scarce. This is *fluor-spar*, a translucent crystalline substance marked with blue, red, and purple.[1] A lump of it, found at the *Marmoratum* in the present century, has been cut into slabs to line the high altar of the Church of the *Jesu.* A few other pieces have been found among the ruins of Rome.

[1] Large quantities of this beautiful material are found near Matlock in Derbyshire, but these mines do not appear to have been worked by the Romans. The *murrha* of Pliny came from the East.

Corsi, *Pietre antiche*, 1845, pp. 165 to 195, attempts, and apparently with success, to show that this is the substance of which the precious *murrhine cups* were made (see Pliny, *Hist. Nat.* xxxvii. 7–12). It was certainly a natural stone, and not Chinese *porcelain*, as has been suggested on the strength of a passage where Propertius (IV. v. 25) speaks of it as "*cocta focis*," "baked in the fire." The context shows that he may be speaking of *sham* myrrhine cups.

The *Museo Kircheriano* possesses a small shallow cup made of fluor-spar, which appears to be antique.

Hard stones, such as *granites*, *basalts*, and *porphyries* were first introduced into Rome in the latter part of the first century B.C., and were afterwards imported in enormous quantities, especially in the form of huge monolithic columns. To bring these and the granite obelisks from Egypt gigantic ships were specially built. (See Pliny, *Hist. Nat.* xxxvi. 1 and 14.)[1]

These are all very refractory, and can only be worked by the help of emery or diamond dust.

The former was got chiefly from the island of Naxos. (Pliny, *Hist. Nat.* xxxvi. 10.) Drills worked with diamond dust are mentioned by Pliny (*Hist. Nat.* xxxvii. 76).

The *basalts* (*Basanites* of Pliny, xxxvi. 11) are of various colours—black, green, and brown, usually free from spots or markings. Examples of all three exist, but are comparatively rare. In the period of Decadence basalt and porphyry was used for statues, as for example that of the Nile in the *Temple of Peace* (see p. 261), and the existing statue of Minerva on the Capitoline steps.

Pliny (*Hist. Nat.* xxxvi. 11) mentions that the first

[1] The enormous ship, which had brought an obelisk from Egypt in the reign of Caligula, was sunk by Claudius at Ostia to form foundations for part of a new harbour; it was of such enormous size that it nearly equalled in length a whole side of the great harbour. Remains of it still exist. (See Pliny, *Hist. Nat.* xxxvi. 14, and Suet. *Claud.* 20.)

porphyry statue was sent from Egypt to Rome in the reign of Claudius, but in Rome, he says, this practice of cutting statues in porphyry was not imitated.

The red porphyry (*Porphyrites*) was brought from Egypt to Rome in enormous quantities, and was used chiefly for monolithic columns and pavements; many examples exist. It has a deep red ground, covered with small white specks of feldspar, and was hence called *Leptopsephos* or "white-spotted."

A rich green *porphyry* was also much used, but not in such large masses as the red sort.

This is the *Lapis Lacedæmonius* (wrongly called *Serpentino* by the modern Romans), so named from its quarries in the Lacedæmonian Mt. Taygetus, near the city of Sparta (Pausan. *Lacon.* lib. iii. and viii.; Pliny, *Hist. Nat.* xxxvi. 11; and Juv. xi. 173). It has a rich green ground, covered with rectangular greenish-white crystals of feldspar. It appears to have been mostly used for pavements and wall linings. It occurs in the pavement of the *Triclinium* of the Flavian Palace.

Great quantities of it are used in the mediæval church floors with mosaic of *Opus Alexandrinum*. It does not as a rule occur in blocks large enough for columns.

The *granites* used in Rome came mostly from Syene, on the Nile, and other quarries near the first cataract (Pliny, *Hist. Nat.* xxxvi. 13).

The red granite was called *Lapis Pyrrhopoecilus*, and the gray *Lapis Psaronius*. The columns of Trajan's *Basilica Ulpia* are a fine example of the latter. Both sorts are used for the columns of the Pantheon, and the *Temple of Saturn* in the Forum.

The granites from Elba were also used in ancient Rome, though much less than those from Egypt.

The quarries all over the Roman Empire were mostly worked by slaves and convicts, and were presided over by a number of officials—*præfecti marmorum*, *tabularii ad marmora*,

procuratores montium, and other grades.[1] The selection of the beds and the general direction of the work was entrusted to a class of mining engineers called *machinarii*, under whom worked the *lapicidæ* and the *metallarii*.

The blocks, before being shipped off, were usually numbered, and were frequently marked with the name of the reigning emperor, and that of the *præfectus* or other official in charge of the quarry.[2]

The blocks were brought up the Tiber, and landed at a special marble wharf—the *marmoratum*—below the Aventine Hill. Extensive remains of this massive stone wharf have been discovered, and also a very large number of blocks of marble which had been landed but never used. Most of these were used by Pius IX. to decorate the churches of Rome.

The marble and stone masons of Rome formed a very large body of workmen, divided into many classes:—*statuarii* or *fictores* (sculptors of statues), *sculptores* (carvers of foliage and architectural ornament), *lapidarii* (workers of mouldings and simple details in stone), *marmorarii* (do. in marble), *politores* (polishers), *characterarii* (cutters of inscriptions), *musivarii* (mosaic workers), *quadratarii* (blockers-out in the rough), *cæsores* (sawyers).

[1] An interesting inscription was found by Belzoni in one of the Nile granite quarries, dedicating it to Jupiter Ammon in the name of Severus, his sons, and wife; it also records the names of the *præfectus operum* (see Corsi, *Pietre ant.* p. 23).

[2] A valuable paper on these quarry-marks was published by Bruzza (*Ann. Inst.* 1870, p. 106 *seq.*) These marks are often of great value in determining the date of a building or statue. On the under part of the so-called "*Trophies of Marius*," which once stood in the *Nymphæum of Severus Alexander*, and are now by the Capitoline Steps, is this quarry-mark, showing that the block, which is of Athenian marble, was sent to Rome in the reign of Domitian by the freedman Chresimus.

IMP . DOM . AVG.
⁂ C ≥ GERM . PER
CHREZ . LIB

Architectural Styles of Roman Buildings.

The architecture of ancient Rome may be said to have passed through three stages—first the Etruscan, second the Greek, and third the Roman.

I. The Romans of all periods appear to have been a thoroughly inartistic race, endowed with great powers of learning and adapting from various nations that proficiency in the fine arts in which they themselves were wanting. The Etruscans, on the other hand, whose country surrounded the primitive city of Rome, and who appear to have formed an important part of the ruling classes among the early Romans, were a nation highly skilled in the practice of the fine arts, although without, as it seems, much real originality.[1]

Their architecture, painting, and sculpture, appear to have been an ingenious compound of these arts as practised in Greece, Assyria, and Egypt, a combination mainly due to the active commerce which was carried on between those countries and the shores of Etruria by a large fleet of Phœnician traders.

The same Etruscan tomb will contain wall paintings of Homeric scenes drawn with much of the true Hellenic grace and beauty, doors and cornices almost exactly resembling those of certain tombs in Egypt, and painted vases with the oft-repeated sacred symbol of the tree or the fire-altar between two attendant genii or beasts—one of the oldest of Aryan symbols, and one which is repeated over and over in wall-sculptures, cylinders, and other objects found in the ancient cities of Babylonia and Assyria,[2] but was quite unknown in Egypt.

[1] Their mechanical skill was superior to their power of design; even among the Greeks Etruscan bronze work was celebrated.

[2] This symbol never occurs in Egyptian art, and, though common on early Hellenic pottery, appears to be of Oriental origin.

It was this strange Etruscan medley of the art of various Eastern countries that was adopted and imitated during the first few centuries of the existence of Rome. This is clear, not only from the scanty existing remains, but also from the universal agreement of the ancient Roman writers themselves as to the character of the early Roman buildings and their decoration.

The primitive temple was either a simple *Cella*, such as we see on the Palatine near the *Scalæ Caci;* or, if a more ambitious building, like the Temple of Jupiter on the *Capitolium*,[1] had a *peristyle* of widely spaced (*arœostyle*) columns, so that the architrave was necessarily of wood, owing to the intercolumniation being more than a stone lintel could span.

The architectural decorations of these early buildings were in gilt bronze, or painted terra-cotta, rather than in stone; and the pictures and statues they contained were not only Etruscan in style, but were usually the work of Etruscan artists. This was notably the case with the terra-cotta sculpture on the pediment of the *Temple of Capitoline Jupiter* (see p. 288).

Pliny (*Hist. Nat.* xxxv. 45, quoting Varro), says that the painting and sculpture of the *Temple of Ceres*, near the *Circus Maximus*,[2] were the work of the first Greek artists employed in Rome, and that before then (c. 493 B.C.), "*all things in temples were Etruscan.*"

Vitruvius (iii. 3), speaking of Roman temples in the Etruscan style, says—"*Ornantque signis fictilibus aut æreis inauratis earum fastigia, Tuscanico more: uti est ad Circum Maximum Cereris, et Herculis Pompeiani, item Capitolii,*" *i.e.* "The pediments of Tuscan (Etruscan) temples are adorned with statues of terra-cotta or of gilt bronze, in the Etruscan fashion;

[1] Not only the architectural form of this ancient temple was purely Etruscan, but so also was its special triad of deities, Jupiter, Juno, and Minerva.

[2] Remains of the temple are built into the *Church of S. Maria in Cosmedin.*

as is the case with the *Temple of Ceres* at the *Circus Maximus*, that of *Hercules Pompeianus*, and that (of Jupiter) on the *Capitolium*." (See also Vitr. iv. 7, and vi. 3.)

II. *The Greek Style.*[1] The Greek influence is more obvious; nearly all the temples of the late Republican and earlier Imperial age are Hellenic in style, with slight modifications, not only in general design, but also in minute details and ornaments. Many Greek architects were employed in Rome, such as the celebrated Apollodorus in the reigns of Trajan and Hadrian; and those architects who were Romans by race, such as M. Vitruvius, C. Mutius, and Cossutius (first century B.C.), Severus and Celer under Nero, and Rabinius under Domitian, were purely Greek by training, and in most cases obtained their professional education in Athens. (See Vitr. vii. *Præf.*; Hirt. *Gesch. der Bauk.* ii. p. 257; and Burn's *Rome*, p. 76.[2]

The Ionic and Corinthian styles were adopted by the Romans with but little alteration; while the Doric was usually merged into that modified form which had been adopted by the Etruscans, and was hence called Tuscan. Another Romanised form of Doric was also used, but its severe purity of form was but little appreciated by the splendour-loving Romans.

The Roman tendency was to increase the size of the *Cella*, either by making the temple wider in proportion to its length than a Greek temple would have been, as is the case with the

[1] A great impulse was given to the taste for Greek works of art by the capture of Syracuse by Marcellus in 212 B.C. (Liv. xxv. 40), and by the sack of Tarentum (Liv. xxvii. 16).

[2] Indirectly there was much Greek influence in the primitive Etruscan art of Rome, and possibly direct influence also. According to tradition Tarquinius Priscus was a Greek, the son of Demaratus, the Tyrant of Corinth, who had been expelled by Cypselus in 665 B.C. The conquest of Magna Græcia and Sicily in the third century B.C., and the taking of Corinth by Mummius in 146 B.C., filled Rome with the spoils of Greek art.

Temple of Castor, or by sacrificing the *peristyle* and building a large *Cella* with *prostyle Portico* and engaged columns[1] along its walls; as, for example, the temple of "*Fortuna virilis*" (so-called); see fig. 44, p. 377; and the *Temples of Saturn*, *Vespasian*, and *Faustina*. Another point in which the Roman temples differed from those of the Greeks was in the lofty *stylobate* or *podium* on which they were very frequently raised, examples of which are the *Temples of Castor*, *Divus Julius*, and *Saturn*, all in the *Forum Magnum*. It is, however, more in the architectural details that the Roman want of taste showed itself, and though they were at first content to copy the Greek mouldings and enrichments, almost with absolute fidelity, yet the Roman craving for richness of effect soon led them to cover all the various members of the *entablature* with elaborate surface ornament, a very great artistic mistake, as the plain flat *coronæ* and *fillets*, catching the light strongly, served a very important purpose in setting off by contrast the lines of dark hollows and delicate surface enrichments applied to a few of the members only. The slight commencement of this decadence in taste can be seen even in the very splendid and well-designed cornice of the *Temple of Concord;* it has progressed further in the cornice of the *Temple of Vespasian*, in which one of the *coronæ* is cut into short upright flutings, and the lower egg and dart member is covered with elaborate surface ornament. Later on, in the second and third century, it was carried further still, till every single member in a cornice was often covered with enrichments, leaving no plain surfaces to relieve the eye or to give bands of bright light. A remarkable example of this is the very beautifully executed cornice which was used by Maxentius

[1] Engaged columns were used by the Greeks during the fifth century B.C., as in the great Doric Olympeium of Agrigentum, the "lion-tomb" at Cnidus, and in the next century as in the Corinthian *Choragic monument of Lysicrates;* they were, however, used much less frequently by the Greeks than by their Roman imitators.

(taken from some earlier building) to decorate the door of the temple to his son Romulus (see p. 264).

III. *The Native Roman Style:* see p. 301, on the *Amphitheatres.* The Romans, though quite devoid of any artistic originality, or even power of refined appreciation, were the most able of engineers, and were remarkably skilful in contriving and planning so as to fulfil in the most complete way all the practical requirements of their different buildings.

This purely utilitarian spirit led naturally and easily to the development of a new style, which had at least that beauty which *fitness* is supposed to bring with it, and frequently possessed, even if it were by accident, much harmony of proportion and grandeur of effect from the vastness of its mass.

In their desire for large covered halls the Romans were led to throw aside the restrictions imposed by the Hellenic use of the stone lintel, and even the more elastic limits permitted by the use of the wooden beam; and making use of their strong natural cement (the *pozzolana*) constructed concrete domes and vaults of enormous span, cast in one solid mass of concrete, which covered the space like a metal lid without lateral thrust; having, that is, the *form* but not the principle of the arch. This allowed them safely to vault spaces so wide that the walls would have been pushed out if they had been covered with a true arched vault either in brick or stone.

It is frequently supposed that the main characteristic of the native architecture of Rome was the great development of the principle of the arch: that this was not the case I have attempted to show below (see p. 32).

Roman Methods of Construction.

The walls of the ancient buildings of Rome, constructionally speaking, are of two sorts only, namely—(I.) of *Opus quadratum*, or (II.) of *Concrete. Concrete walls* may be divided into five classes—(i.) unfaced; (ii.) faced with *opus incertum;* (iii.)

faced with *opus reticulatum;* (iv.) faced with brick; and (v.) faced with mixed brick and small tufa blocks, commonly called *opus mixtum.*[1]

I. *Opus Quadratum*, that is masonry of rectangular blocks, is the most primitive among existing methods of building in Rome. The earliest example, the pre-historic wall of *Roma Quadrata*, is described below.

At first *tufa* was the only material used, and neither clamps nor mortar were used to bind the wall together. Soon *peperino* was worked, as for example is seen in the wall of Servius Tullius (see p. 69).

Mortar was introduced at a very remote period; it occurs in the *Tullianum*, probably among existing buildings the next in date to the pre-historic fortifications of the Palatine (see fig. 9, p. 79). Its purpose was not, however, like that of modern mortar, to bind the blocks together, but it was a mere skin about the thickness of cardboard, apparently of pure lime, introduced simply to give the joints and beds quite even and smoothly-fitting surfaces. This thin layer of lime occurs in the Servian wall on the Aventine; in the *peperino* wall of the front of the *Tabularium* (see fig. 26, p. 240); and in the tufa walls of the Colosseum (see fig. 33, p. 313). It is, however, more usually omitted, its presence or absence being a matter of very little importance with such perfectly-fitting masonry as was made by the Romans.

Even the earliest blocks—those of the so-called wall of Romulus—were worked with metal tools, distinct marks of which exist in places where the surface is well-preserved.[2]

[1] It is a mistake to speak of *Opus incertum* and *reticulatum* as if they were methods of construction belonging to the same category as *Opus quadratum:* like brick, they are merely used as *facings* to walls, which are constructionally of concrete.

[2] It has been more than once stated that these primitive tufa blocks were split with wooden wedges; that was never the case, and indeed it would be impossible to square tufa in this way.

The sizes of the blocks, whether of *tufa* or *peperino*, from the earliest period till the time of the Empire, appear to have been almost always the same in two of their dimensions; that is, they were roughly two Roman feet deep (about 1.11½), and the same across the ends. In the ruder primitive work these dimensions can only be taken as an average, but under the Republic they were followed with much accuracy. The lengths of the blocks as a rule vary, but in the finest specimen of *Opus quadratum*, that of the front of the *Tabularium*, 78 B.C., the blocks are exactly the same in all their dimensions; the end is a square of two Roman feet, and the length exactly four feet; so that one block set lengthways in the wall (*stretcher*) ranges exactly with two set endways (*headers*). They are arranged with a course of *headers* and then a course of *stretchers* alternately, all the way up.

This masonry with courses of regular depth is called by Vitruvius *isodomon;* and the bonding arrangement, with alternate courses of headers and stretchers, is called *Emplecton* (from ἐμπλέκειν, to weave in), and the extra long "through stones," extending the whole thickness of the wall, were called διατόνοι.

This solid kind of masonry, formed wholly of rectangular blocks, is described by Vitruvius as if it were peculiar to the Greeks, in spite of its having once been largely practised in Rome. In his time the Roman method was to make the bulk of the wall of concrete, and only face it with stone: he thus contrasts the two systems—*Græci vero non ita; sed plana* (*coria*) *collocantes, et longitudines chororum alternis coagmentis in crassitudinem instruentes, non media farciunt* (do not fill up the middle with concrete) *sed e suis frontatis perpetuum et in unam crassitudinem parietem consolidant.*

Great care was taken by the Romans in the close fitting of the beds and joints in *Opus quadratum;* and during the republican and early imperial period each block was carefully fastened to the adjacent ones with dowels or clamps. As

Vitruvius (ii. 8) says—*cum his ansis ferreis et plumbo frontes vinctæ sunt.*

The iron clamps were usually very massive; they were turned down at each end, and then fixed with melted lead. Other dowels of a dovetail shape were very commonly used; these appear to have been of wood.

Travertine was probably not much used before the first century B.C., and then chiefly for ornamental purposes, and for giving extra strength at certain points (see fig. 33, p. 313). When used for walls it was not cut into regular courses, but was worked up so as to involve as little labour as possible, and the least amount of waste, being both much harder and more valuable than the *tufa*, or even the *peperino*.[1]

This masonry with unequal courses is the *pseudisodomon* of Vitruvius; and when walls were built of *tufa* or *peperino*, mixed with *travertine*, the former are cut in unequal courses so as to range with the latter. The finest example of a solid travertine wall in Rome is perhaps what remains of the wall round the *podium* of the *Temple of Vespasian;* here the massive and perfectly jointed blocks of travertine were simply used for the sake of strength, as they were completely cased with marble; the great iron clamps which unite all the blocks are really quite superfluous—as there was no lateral pressure, and the immense weight of each stone was amply sufficient to keep it in position.

In most cases *travertine* was used for archways, and other points of extra strain. In the *Forum Julii* it is used only for the keystones and springers of the tufa flat arches (see p. 255), and in the *Forum of Augustus* for the cornice and the *voussoirs* of the large *skew arch*, now called *l'arco de' pantani*. The smaller arches are built, like the rest of the wall, of *peperino*.

[1] The primitive walls of Tibur (Tivoli) are built of *tufa*, which had to be brought some distance, though there is an abundant supply of travertine on the spot. The tufa was so much easier to work that it was less trouble to carry it a long distance rather than use the hard travertine.

Similarly, in the existing wall of the *Forum Pacis* the *voussoirs* and jambs of the archway are of *travertine*, while the rest is of mixed *tufa* and *peperino*. The way in which *travertine* is mixed with *tufa* in some of the lofty inner walls of the Colosseum, in order to give additional strength, is described at p. 313 (see fig. 33). Some of the blocks used in the arcades of the Colosseum are as much as 15 feet long by 8 wide.

II. *Concrete Walls.* Concrete is by far the most important and largely used of all the building materials of Rome. It was made by mixing *pozzolana*, lime and broken stones (usually about the size of a man's fist) with sufficient water to reduce the whole mass to a semi-fluid state, which could be cast into the required forms of walls or vaults, as is described below. The special stone which is used in a concrete wall is often an indication of its date.

In the earliest concrete, probably till nearly the end of the Republican period, only broken lumps of *tufa* or *peperino* were used. Next *travertine* and *silex* (lava) were much used, more especially for foundations; and under the Empire concrete walls were largely made with broken pieces of brick.

As marble became plentiful after the Christian era, it frequently appears as a constituent of the concrete; waste pieces, and columns or wall-linings injured by fire, were broken up on the spot, and used for the concrete of new walls.[1]

Lastly, during the period of decadence, while the magnificent buildings of Rome were falling into ruin, concrete was made of marble alone, and sometimes even of the valuable oriental porphyries.

In the Early Middle Ages no better use for the splendid marble decorations of the classical buildings appears to have been known than to burn part into lime and break the rest up into small pieces for concrete.[2]

[1] In the restored walls of the Flavian Palace, on the Palatine, quantities of fire-stained marble can be seen mixed with the broken brick and other materials of the concrete.

[2] The remains of the massive walls of the twelfth century, *Turris*

Another material, pumice-stone, was often used to make the concrete of vaults, though more frequently the ordinary soft tufa is used for this.

(i.) *Unfaced Concrete.* This was usually used for foundations, but in some places it was carried up to a great height, as in the substructures of Caligula's palace, and the whole lower story of Hadrian's *Exedra* in the *Palatine Stadium.* Why it was not more generally used it is difficult to say, but the fact remains that nearly all concrete walls which were visible above ground were faced in one of the modes mentioned below. These smooth facings were not for the sake of appearance, as they were nearly always covered with marble or stucco; and they had the serious disadvantage of presenting so smooth a surface that the stucco had no "key" to hold on by, and elaborate provisions had to be made to get over this difficulty. The concrete walls were cast between two lines of wooden boarding, formed thus:—Upright posts, 10 to 15 feet high, were stuck in the ground along the line of both faces of the future wall, about 3 feet apart, and against these posts wooden boards were nailed horizontally, overlapping one another; into the intermediate space the concrete was poured, and received on its surface the imprint of the post and boards. When the concrete had set, the wooden framing was removed, and refixed on the top of the wall; and the process was repeated till the wall was raised to the required height.[1]

Walls thus formed, especially when the hard *lava* and *travertine* were used, were stronger and more durable than even the most solid masonry. Blocks of stone, however massive, could be removed one by one by the same force that

Chartularia (see p. 142), consist of concrete made of marble alone. The splendid porphyry columns of the Temple of Venus and Rome were broken up to build the kilns, in which the equally magnificent marble columns were burnt into lime on the floor of the temple.

[1] It need hardly be said that the Romans did not leave the wooden framing to rot in the grooves of the concrete, as has, however, been stated.

set them in place, but a concrete wall was one perfectly solid mass, and could only be destroyed by a laborious process, like that of quarrying hard stone from its native rock.

This has, unhappily, been shown in a very striking way by the recent wholesale destruction of ancient buildings on the Esquiline, near the *Horti Sallustiani*. The primitive wall of the kings was easily removed, block by block, and the tufa broken up to use in the new Boulevard; but the later buildings, with walls of concrete, were only destroyed with great difficulty and by the help of dynamite.

(ii.) Concrete faced with *Opus incertum*. This method of facing walls was used during the time of the Republic, but was nearly obsolete in the reign of Augustus, when Vitruvius was writing. He speaks of it thus—lib. ii. 8, ". . . *reticulatum, quo nunc omnes utuntur, et antiquum, quod incertum dicitur.*" Irregularly shaped bits of tufa were cut smooth on one face, and roughly pointed behind; the whole face of the concrete wall was then studded with these stones, the points sticking into the wall, and the smooth surfaces appearing on the face. The pieces, square, triangular, or polygonal, range from 2 to 5 inches across. Examples of this method of facing exist in the thick concrete wall at the foot of the *Scalæ Caci*, and other places on the Palatine; in some of the houses built against the wall of Servius, by the railway station; and in the *Emporium*, a great series of storehouses on the banks of the Tiber.

(iii.) *Opus reticulatum* is like *Opus incertum*, except that each little block of *tufa* is a true square, and all are arranged to run in diagonal lines, like a sort of network, whence came its name. It appears to have been first used in the early part of the first century B.C., and continued till the reign of Hadrian. The earlier sort, till the reign of Tiberius, has small squares of tufa, usually 2 to 3 inches across, very neatly fitted together. The quoins or angles of the walls have neatly cut rectangular pieces of tufa, arranged to work in with the reticulated part;

and the arched openings, whether flat or semicircular, have well-jointed tufa *voussoirs*, about 9 inches long by $3\frac{1}{2}$ wide.

The "*Muro torto*," the Mausoleum of Augustus, the so-called *Auditorium of Mæcenas*, the "House of Livia" (see p. 99), and other buildings on the Palatine, built against the walls of *Roma Quadrata*, are the best examples in Rome of this early kind of reticulated facing (see fig. 1).[1]

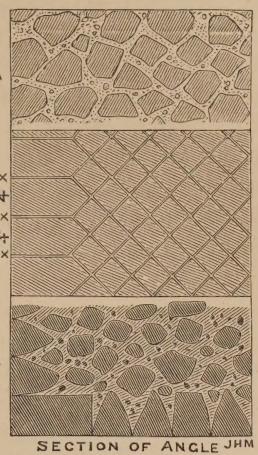

Fig. 1.
Concrete wall faced with (A) Opus incertum and (B) Opus reticulatum. C Shows the Section, similar in both.

The later kinds of *Opus reticulatum* differ from the earlier in having no rectangular tufa quoins or *voussoirs*, but have brick facing at the angles, and brick bands about a foot deep are introduced at intervals of 2 or 3 feet. In some cases the *Opus reticulatum* is merely used as a patch or panel in the middle of a wall faced with brickwork.

Examples of this exist in the lower rooms of the Palace of Caligula, which face on to the *Nova Via;* and in the substructures of the *Thermæ of Titus*, which cut through the remains of Nero's *Golden House*. Hadrian's Villa near Tivoli is one of the latest examples of this mixed use of brick and reticulated wall facing.

(iv.) *Brick-facing.* Facing of burnt brick did not probably come into use in Rome before the first century B.C. The *Rostra* and the *Pantheon* are the earliest examples of known date, namely 44 B.C. and 27 B.C.

[1] In Rome *Opus reticulatum* is invariably of *tufa*, but some examples exist on the *Via Appia*, towards Albano, where *peperino* and *lava* are used instead.

It should be observed that in ancient Rome brick, whether for walls or arches, was used merely as a thin facing, and was of little constructional importance. In the true sense of the word there is no such thing as a brick wall among all the ruins of Rome; the actual wall or vault is always made of concrete, and the bricks are merely used as a thin skin over the visible faces. Except at the angles of walls, these facing bricks are triangular in shape, so as to make a good bond with the concrete core and present a large surface with a small quantity of burnt clay. This apparent parsimony was probably due to the comparative scarcity of wood for fuel in the neighbourhood of Rome. Even party-walls of small rooms, which are sometimes only 7 inches thick, are not built solid, but have an inner core of concrete, with a facing of very small brick triangles (see fig. 2).

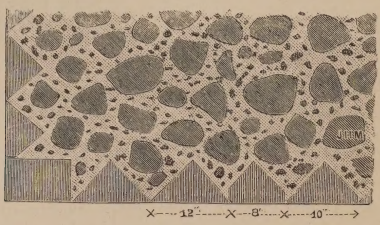

Fig. 2.
Section of concrete wall, showing the use of bricks merely as a facing.

The same is the case with the so-called relieving arches—made of *tegulæ bipedales*—two-foot tiles—so frequently found in Roman walls. They, as a rule, only tail into the wall from 3 to 4 inches, with at rare intervals whole two-foot tiles inserted. Many theories have been invented as to the use of the so-called relieving arches, (for example) in the walls of the Pantheon, to concentrate the pressure on to certain points; but when the fact is realised that the concrete wall is nearly 20 feet thick, and that its brick facing and arches merely enter

it to an average depth of about 5 inches, it will easily be seen that these "relieving" arches have about as much constructional use as if they were painted on the surface of the wall.

That the Romans themselves were under no delusion as to these facing arches being of any structural importance is shown by the fact that they very often omitted the upper part of an arch if it happened to be hidden by a projecting vault passing in front of it. This method of construction was the secret of the immense strength and durability of the Roman buildings —each wall was one solid coherent mass, like a great slab of stone; openings of any form could be made in it and it would still hold together.[1] And, more important still, the vaults and arches were quite free from lateral thrust.

The character of the brick facing is often a clear indication of the date of a wall, if all the points about it are very carefully examined—the size, colour, and quality of the bricks, the thickness of the joints, the quality of the mortar, and the colour of the *pozzolana* used.

It has been stated that some guide to the date of a Roman wall can be obtained simply by measuring the number of brick courses that go to a foot; this is not the case. In early work the bricks are thick and the joints thin, while in later times the reverse is the case. Thus brick facing of the first half of the third century has more courses to the foot than that of the Flavian period.

The following list gives a few characteristic specimens of different dates:—

[1] In the Baths of Caracalla remarkable instances of this can be seen. In one place the concrete wall was originally supported by two columns: the columns have been taken away, and the wall above still remains, hanging like a curtain from the concrete vault.

	Date.	Average Thickness of Bricks.	Average Thickness of Joints.
Rostra of J. Cæsar . . .	44 B.C.	$1\frac{1}{2}$ inch.	$\frac{1}{4}$ inch.
Pantheon of Agrippa . . .	27 B.C.	$1\frac{1}{2}$,,	$\frac{3}{8}$–$\frac{1}{2}$,,
Prætorian Camp of Tiberius . .	23 A.D.	$1\frac{1}{4}$–$1\frac{3}{4}$,,	$\frac{1}{4}$–$\frac{1}{2}$,,
Aqueduct of Nero (Aqua Claudia) .	c. 62 A.D.	1–$1\frac{1}{4}$,,	$\frac{3}{8}$–$\frac{1}{2}$,,
Baths of Titus	80 A.D.	$1\frac{1}{2}$,,	$\frac{1}{2}$,,
Palace of Domitian . . .	c. 90 A.D.		
Hadrian Temple of Venus and Rome	c. 125 A.D.	$1\frac{1}{2}$,,	1 ,,
Palace of Severus	c. 200 A.D.	1 ,,	$\frac{3}{4}$,,
Aurelian's Walls of Rome . .	c. 271	$1\frac{1}{4}$–$1\frac{3}{4}$,,	$1\frac{1}{4}$–$1\frac{1}{2}$,,

It must, however, be remembered that very great varieties occur during the same reign, and even in the same part of a building; a new gang of workmen or a batch of bricks from a fresh *figlina* would naturally occasion this; and hence very great caution is necessary in judging of the dates from merely the internal evidence of the brickwork.[1]

Finer joints and special neatness are always to be seen in those exceptional walls, the brick facing of which was left exposed and not hidden either with stucco or marble, as was the case with Nero's continuation of the Claudian Aqueduct.

The apparent length of bricks always varies very much; this is owing to the fact that one or more of the sharp points of the triangle were very often broken off before the brick was built into its place, and hence comparatively few of them are quite perfect. The bricks are set in mortar made of lime and *pozzolana*, the latter usually of a bright red colour, but in the inferior mortar of the third century and later it is more often brown.

[1] In the remains of the Golden House of Nero under the Thermæ of Titus the most different varieties both of workmanship and size of bricks can be observed. The usual maximum thickness for Roman bricks is $1\frac{1}{2}$ inch, but in this building many bricks are fully $2\frac{1}{2}$ inches thick; others again are only $1\frac{1}{4}$.

(v.) The term *Opus mixtum*, though not a classical one, is now used to denote wall facings with alternate courses of brick and small blocks of tufa; it was much used during the fourth to the sixth century. The *Circus of Maxentius* is the earliest dated example, being of about the year A.D. 310; it is used in the latest alterations of the Palatine Stadium and the Flavian Palace, probably the work of Theodoric, about A.D. 500. Another example is the so-called Basilica by the Sacra Via.

In all the above mentioned varieties of walling, whether the facing was of Opus reticulatum, brick, or opus mixtum, the main concrete mass appears to have been temporarily supported by wooden framing, arranged in the way described, for the unfaced concrete walls. This was necessary to prevent the thin facing from being pushed out by the semi-fluid concrete.

Cements and Stucco of very great variety were made by the Romans, and of the finest possible quality. The fine, hard, white stucco, which was used to cover stone and even marble buildings, was called *Opus albarium.* It is usually made of pure lime and pounded marble, and was hence also called *Cœmentum marmoreum* (Vitr. vii. 6). Marble appears to have been used for this purpose before it was introduced as a building material. The stucco which was used to cover walls was called *Opus tectorium;* minute accounts are given of these various kinds of stucco by Vitruvius (vii. caps. 2 to 6).[1] They were prepared with great care to receive paintings, and the finishing coat was usually polished to a surface like marble; it was, in fact, a kind of artificial marble; and, when protected from rain, but very little inferior to the real thing. The wall stucco was applied in three or four coats, the whole being often more than two inches thick.[2] The fine *Opus*

[1] Pliny's remarks on this subject (*Hist. Nat.* xxxvi. 53 to 64), like the rest of his information on constructional matters, is taken from Vitruvius.

[2] A painting in a house at Pompeii represents plasterers at work; they are using wooden "floats," exactly like those still in use. (See *Ann. Inst.*, vol. for 1881.)

albarium, made of pounded marble, was only used for the finishing coat, the lower ones being of *pozzolana* and lime, like the mortar used for bedding the bricks. This coating of fine white marble cement appears to have been invariably applied to buildings of stone which were of an ornamental character, such as temples and the like, and, as among the Greeks,[1] even white marble was usually coated with a thin skin of *Opus albarium;* the object of this was to afford a more absorbent ground for painted decorations than that of the marble itself.

Even when walls of Roman buildings were to be lined with marble they were first covered with a thick coat of the coarser cement, in order to give a firm bed to hold the marble slabs. The brick wall-facings were, however, so smooth that they afforded very little hold or "key" either for the painted stucco or for the cement backing of the marble.

The modern practice of forming an uneven surface by raking out the joints of the brickwork, was not employed by the Romans, who adopted instead a much more expensive and laborious method. This was to drive large iron nails at intervals into the joints of the brick-work, all over the surface of the wall; these projecting nails gave the stucco or cement a sufficient hold, and were concealed from view by the finishing coats. Very frequently small plugs of marble, about 1 inch by $1\frac{1}{2}$ inch, were driven into the wall, either alone or in conjunction with the iron nails.[2] When driven in by the side

[1] The beautiful pure white Pentelic marble of the *Propylæa* and other buildings on the Acropolis of Athens were coated with a thin skin of similar stucco to that which was used in Rome, and were then painted with coloured decorations.

[2] It is very easy to overlook these iron nails, as their projecting part has usually rusted away, but a close examination will reveal their stumps, or the stains left by them, in almost all cases when brick-faced walls in Rome were either covered with stucco or cement backing behind marble slabs. The marble plugs are more visible, and can be seen in a very large number of the buildings of ancient Rome. In *Opus reticulatum* the nails

of the nails their object appears to have been to give the iron something harder than brick to bite upon. Sometimes, but rarely, flat bronze pegs were used instead of iron; some of these are to be seen in the walls of the Flavian Palace on the Palatine.

A specially hard kind of cement, called *Opus signinum* (Vitr. viii. 6), *Opus testaceum*, or *ex testis tunsis*, was made of lime and *pozzolana*, mixed with pounded brick or pottery.[1] It was specially used to line the channels (*specus*) of aqueducts, cisterns, and for other hydraulic purposes, and very commonly as one of the cement layers under mosaic pavements and under-floors of *Hypocausts*. It was of very great strength, and had the double advantage of perfectly resisting both water and fire, hence its use both for aqueducts and *Hypocausts*.

Vitruvius (vii. 1) describes the various kinds of concrete and cement used to form a bed for marble pavings—First, *statumen*, a layer of broken stones, each not less than what would fill a man's hand; second, *rudus*, smaller stones, mixed in the proportion of three to one of lime and carefully rammed down to an even surface; third, *nucleus*, made of lime and pounded pottery, on which the marble slabs or mosaics were bedded; fourth, upon the marble a fine fluid cement of lime and pounded marble was poured, so as to fill up all the interstices between the slabs or *tesseræ*, and finally the whole surface was polished. Many existing examples are formed with these various layers, except that usually the *statumen* is omitted. Pavements were also made with a surface of hard white cement, made of coarsely pounded marble, *cæmentum marmoreum*; part of the *Regia* is paved in this way, see p. 188.

For common floors the square *tegulæ bipedales* were very frequently used, and also small bricks, about four inches long

were not always used; but instead of this the surface of the tufa squares was slightly pecked over in order to roughen it and so hold the stucco.

[1] Enormous quantities of this were used, and *Monte Testaccio* is probably a store heap of broken pots for use in making *Opus signinum*.

by one wide, set on edge herring-bone fashion; this was called *Opus spicatum*, from *spica* an ear of bearded wheat.

Vitruvius gives many interesting details about the manner of painting on stucco walls (vii. 5 and 6): this was done to a certain extent on the last coat while it was wet, like the mediæval *fresco buono*, but the minute details and finishing touches were usually applied *a secco* (Vitr. vii. 3; see p. 415). The lime used was thoroughly slaked and soaked for a long time, that it might not injure the pigments, and with it was mixed both gypsum (plaster of Paris) and powdered marble.

In damp places Vitruvius recommends the walls to be built hollow (vii. 4), as is done in the *Triclinium* of the "House of Livia" (see p. 103). In cap. 5 he describes the various styles of painted decoration; and reprobates the modern custom of representing monsters instead of real objects, and sham architectural subjects with slender reeds and candelabra holding up impossible heavy entablatures—a method of mural decoration which is very common in the houses of Pompeii, and is certainly in the worst possible taste.

Marble linings were usually fixed with great care, and were tied to the wall with long hook-like clamps, the ends of which were fixed with melted lead if the wall was of stone, or if of brick they were wedged into joints. These clamps were usually of iron, but in the more careful work bronze was used. Fig. 3 gives an example of the manner of fixing marble linings, dating from the reign of Augustus. The slabs were cut into thin pieces with saws and sand and water, emery being used for the harder stones[1] (see Pliny, *Hist. Nat.* xxxvi. 9 and 10). In cap. 7 Pliny states that sawn slabs of marble were first used in Mamurra's house on the Cælian (see p. 11).

[1] The drills which were used in working the hard granites and porphyries were both solid and tubular—some as much as 3½ inches in diameter. The circular markings on the sides of drilled holes show by the rapidity of their spirals that the drill must have sunk into the hard granites with

It is impossible to realise the amount of rich marbles which ancient Rome contained; for more than three centuries marbles, alabasters, and porphyries in endless variety were

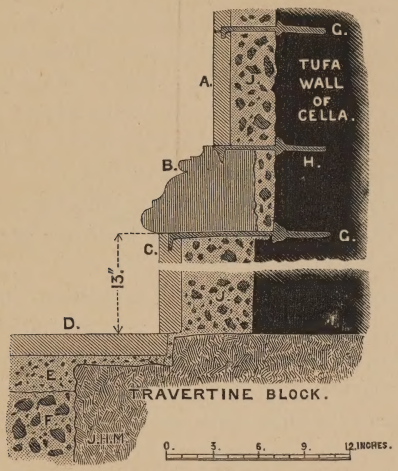

Fig. 3.

Example of marble lining, from the Cella of the Temple of Concord.

A. Slabs of Phrygian marble.
B. Plinth moulding of Numidian "Giallo."
C. Slab of Cipollino (Carystian marble).
D. Paving of Porta Santa.
E and F. "Nucleus" and "rudus" of concrete bedding.
GG. Iron clamps run with lead to fix marble lining.
H. Bronze clamp.
JJ. Cement backing.

being dug out in countless oriental quarries by whole armies of workmen, and were constantly being poured into Rome. Scarcely a church or a palace in Rome is without columns and wall-linings all taken from ancient buildings. The great

wonderful speed. Diamond drills were used by the Egyptians at a very early period, and their use was probably introduced into Rome from Egypt along with the porphyries and granites.

Christian Basilicas, and especially the more magnificent private chapels, such as those of the *Corsini*, *Borghese*, and *Cibo* families, owe their splendour entirely to these stolen marbles. Even the immense quantity which still exists gives no notion whatever of what Rome once possessed; by far the greater quantity perished in the limekilns of the Early Middle Ages.

As Raphael said in his report to Leo X. on the best methods of preserving the ruins of classical Rome, almost every house in the whole city was built with lime made of the beautiful marbles which were once the glory of Rome.[1]

During the Republican period it is probable that by far the majority of the private houses were built to a great extent of wood and sun-baked bricks, *lateres crudi*.

In the reign of Augustus a "Metropolitan Building Act" was drawn up, which did something to improve the stability of Roman houses. Some of the provisions of this Act are mentioned by Vitruvius (ii. 8). Houses in streets, if several stories in height, were to be built "*pilis lapideis, structuris testaceis parietibus cæmentitiis*," that is on stone piers, with walls of concrete and burnt brick. Seventy feet was the limit of height.

It had been the custom to build thick walls of raw (unbaked) brick, and a law was introduced limiting the external thickness of street walls to two feet, a thickness which was not sufficient to support upper stories if unbaked bricks were used. The result of this rule, which seems a strange one, was thus indirectly to force on the people the use of the stronger materials. Houses shored up with wood and ready to fall are mentioned by Juvenal (*Sat.* iii. 193). It was, however, not till the reign of Nero that a complete reform was effected in the construction of Roman houses. Nero had a new and elaborate building Act drawn up requiring fireproof materials, such as *peperino*, to be used for external walls of houses; and it appears very probable that he wilfully caused the great fire

[1] Visconti has published this interesting letter: See *Una lettera di Raffaello a Leone X.*, Rome, 1834.

which destroyed a large part of Rome, in order that he might with effect bring his new Act into operation, and also be able to re-plan the streets on wider and straighter lines (see Suet. *Nero*, 38. This building Act of Nero's limited the height of houses, fixed the minimum width for streets, the thickness of walls, the materials to be used, and contained many other useful provisions.[1]

[1] For the rules of the various building trades see Mommsen, *De Collegiis Rom.* 1843 ; Heineccius, *De Collegiis Opificum*, in *Sylloge Opusc. var.;* and Roth, *De re municipali Rom.*, Stuttgart, 1801. A new Act was drawn up in Trajan's reign, limiting the height of street houses to 60 feet (see Aur. Victor. *Epit.* 13).

CHAPTER II.

PREHISTORIC PERIOD AND TIME OF THE KINGS.

VERY little that is of real historical value with regard to the early settlers on the banks of the Tiber can be gleaned from the traditions of the Romans themselves; but many discoveries that have been made within the last few years combine to show that the site of Rome was populous at a very remote and quite prehistoric period. Flint implements and other remains of the early Bronze Age have been found on the Aventine and in other places; and, especially on the Esquiline, tombs have been brought to light of the most primitive construction, dating probably from a much more remote period than the time traditionally given, 753 B.C., as that of the founding of Rome.[1]

In February 1883, between the Piazza Vitt. Emmanuele and the Via di Napoleone III., on the Esquiline, a number of very primitive cist tombs were found, formed in the most simple way of three slabs of stone, two set on edge for the walls, and one upon them for the lid (see *Notizie degli scavi*, Feb. 1883).

In 1874 the very important discovery was made of a large necropolis also on the Esquiline, near the arch of Gallienus, the tombs of which were Etruscan in character and contained many objects, fictile vases and the like, of that

[1] Some of the tombs found on the Aventine were Etruscan in style, of that primitive subterranean sort to which access is given by a descending shaft like that of a well, with holes cut at intervals for foothold (see Bartoli, *Sepolcri Antichi*, Tav. I. 695).

combined Hellenic and Oriental character which is peculiar to a large class of objects, archaic in style, which have been discovered at many widely distant places on the shores of the Mediterranean, and were evidently introduced by some far-reaching and active commercial system, probably carried on by the adventurous traders of the Phœnician coast.

Among the vases discovered in the Esquiline necropolis were *Aryballoi*, of that rare early kind which combines Hellenic modelling with the enamelled decoration of Egypt or Assyria. These were in the shape of a well-formed human head of the Silenus type, bearded and clothed in a lion's skin, and the whole coated with a true vitreous enamel made white and opaque by oxide of tin, and further decorated with pigments of metallic oxides. Other pieces of pottery were found decorated with brilliant blue and green plumbo-vitreous glazes, coloured with oxides of copper. These methods of decoration are not Hellenic,[1] but were practised very largely in Egypt and Assyria; examples, exactly resembling those found in Rome, have also been discovered in the Island of Ægina, and at Cameiros in the Island of Rhodes.

The discovery of this large necropolis clearly shows that an Etruscan city of great size and importance existed even before the legendary regal period, on one of the largest hills of the *Septimontium*, and is strong evidence against the theory of an early Latin supremacy in Rome.

In other places in Rome, pottery incised with letters and inscriptions of very archaic type have been found; these are figured and described in *Ann. Inst.* for 1880. A good account of part of the Esquiline Necropolis is given in *Ann. Inst.* 1882, p. 5 *seq.*, and *Mon. Inst.* xi. Tav. 37.

[1] One or two exceptions to this rule exist; the principal one is a *Rhyton* in the British Museum, in the form of Cupid riding upon a goose. This is covered with a stanniferous enamel, and was probably produced in Rhodes, where the *technique* of Egypt appears to have been to some extent practised.

Some dim traditions of these earlier inhabitants existed among the Romans down to the literary period, as, for example, the story of the Arcadian Evander, the son of Mercury and the nymph Carmenta, who settled on the site of Rome about sixty years before the Trojan war. Then came a line of Latin king gods: Saturn, who gave his name to the *Mons Saturnius*, afterwards the *Capitolium;* Janus, who named the *Janiculan Hill*, and Picus and Faunus, other demi-gods who ruled as kings on the banks of the Tiber. Next came Hercules with a group of companions, of whom a record was supposed to exist in the altar, and subsequently in the Temple of Saturn in the *Forum Magnum* (see p. 166). Then, according to the story, Æneas and the scanty remnant from Troy arrived, landing at the Tiber mouth, and lived in alliance with the aboriginal King Latinus at Lanuvium, about fifteen miles from the coast.[1]

Even to a late period Lanuvium was regarded as the cradle of the Roman nation, and some of its ancient temples were treated as shrines of special sanctity, and were solemnly visited by consuls and other chief officials of Rome before commencing a term of office.

Some of the dim traditions with regard to these primitive dwellers on the site of Rome existed in very strange forms. A curious instance of this occurs in the following fragment from Dion Cassius, who, to account for the existence of a town on the Palatine Hill earlier than the traditional *Roma Quadrata*[2] of Romulus, invents an earlier Romulus and Remus to be its founders:—

[1] The modern *Civita Lavinia*, on a spur of the Alban Hills, stands partly on the site of the ancient *Lanuvium*. Excavations made in 1884 by Sir Savile Lumley and Mr. R. P. Pullan, exposed remains of a fine temple, probably that of Juno Sospita, and many fragments of sculpture, including parts of a fine quadriga of Greek marble, apparently an ancient copy of some Greek group belonging to a good period of art.

[2] The name *Roma Quadrata* was derived from its rectangular shape (see note 2, on p. 47).

"πρὸ δὲ τῆς μεγάλης ταύτης Ῥώμης ἣν ἔκτισε Ῥώμυλος, περὶ τὴν Φαυστύλου οἰκίαν ἐν ὄρει Παλατίῳ ἑτέρα τετράγωνος ἐκτίσθη Ῥώμη παρὰ Ῥώμου καὶ Ῥωμύλου παλαιοτέρων τούτων" (*Dion Cass.* iii. 5, Leipsic Ed. of 1829). In a fragment of lib. v., an earlier settlement called Οἰνωτρία is mentioned. See Becker, *Handbuch der Röm. Alterth.*, Leipsic, 1843, vol. i. p. 105–6. Another ancient name for the city of Evander was said to be *Valentia, strength*, meaning the same as Ῥώμη (see Solinus, cap. i. *De Consecr. urbis*).

The most important existing relics of the time when Roman history begins, though dimly, to take a definite shape, are the so-called "walls of Romulus" round the circuit of the famous *Roma Quadrata* of the Palatine. (See fig. 4.) Unfortunately, the accounts given by Tacitus and others of the extent of the *Pomœrium* give but little help towards defining its circuit.[1] Tacitus (*Ann.* xii. 24) describes it thus—

"*Sed initium condendi et quod pomœrium Romulus posuerit noscere haud absurdum reor. Igitur a foro Boario ubi æreum tauri simulacrum adspicimus, quia id genus animalium aratro subditur, sulcus designandi oppidi cœptus, ut magnam Herculis aram amplecteretur. Inde certis spatiis interjecti lapides per ima montis Palatini ad aram Consi, mox ad Curias Veteres, tum ad Sacellum Larum, Forumque Romanum; et Capitolium non a Romulo sed a Tito Tatio additum urbi credidere.*"

[1] The word *pomœrium* is derived from *pone* or *post mœrium*, "beyond the wall"; its precise nature is now impossible to discover; even in the first century B.C., it was a matter of only archæological interest, and the notions existing as to its primitive form were very vague and contradictory (see Varro, *Lin. Lat.* v. 143; Liv. i. 44; and Dionys. i. 88). What is fairly certain about it is, that the *pomœrium* was an encircling band of ground which followed the line of the city wall, and was traced in some way by a furrow turned by a plough drawn by a cow and a bull. This ceremony, performed before founding a new town, was of Etruscan origin, like the greater part of the religious rites of the Romans (see Bunsen *Besch. d. Stadt Rom.* i. p. 138, and Mommsen, *Hist. Rom.* vol. i.)

In this passage Tacitus gives a series of points in the sacred circuit (*pomœrium*) round the walls of *Roma Quadrata* on the Palatine. Unfortunately, the known points in this list are precisely those which mark the line of wall about which there could be no doubt, both from the contour of the ground and the existing remains, the side that is towards the valley of the *Velabrum*, with its angles by the *Circus Maximus*, and the *Forum Romanum*. It should be observed that the *Pomœrium* line, as described by Tacitus, was considerably outside that of the wall itself; according to the ancient Etruscan custom a strip of ground was left all round the city, between the furrow of the *Pomœrium* and the actual wall; this was considered sacred, and no houses could be built on it. The "wall of Romulus," as is described below, stood on an artificially formed shelf of rock, rather more than half way up the slopes or cliff of the hill, while the various points mentioned as being on the *Pomœrium* line were *ad ima montis*, at the very foot of the hill, in the valleys which surround it.

The starting-point in Tacitus's list is at the bronze statue of a bull[1] in the *Forum Boarium;* this point marked, probably, the western corner. Thence the sacred furrow (*sulcus primigenius*) was drawn along the *Vallis Murciæ*, probably on the line afterwards occupied by the *Spina* of the *Circus Maximus;* it first passed the *Ara Maxima*, a prehistoric altar sacred to Hercules (see *Mon. and Ann. Inst.* for 1854, p. 28); this apparently stood at the north-west end of the valley, near the *Carceres* or starting-point of the Circus (Dionys. i. 40).

The next point was an *Altar of Consus*, an equestrian Neptune, where Romulus held the *Consualia* (games), at which the celebrated capture of the Sabine women took place. In later times this altar existed in or below part of the *Spina*, near the *Meta*, at the opposite end of the *Carceres*. It was

[1] The work of the celebrated Greek sculptor Myron, a contemporary of Phidias, but rather older than he. Pliny (*Hist. Nat.* xxxiv. 5) mentions it as an example of a statue made of Æginetan bronze.

usually hidden, but during the celebration of the *Ludi Circenses* was uncovered and exposed to view (see p. 283; Tertull. *De Spec.* v. 8; Plut. *Rom.* 14; and Varro, *L. L.* vi. 20).

Of the position of the next mentioned stages in the circuit little is known; these were the *Curiæ Veteres* and the *Sacellum Larum.* The former is mentioned by Varro as the place where "things divine" were discussed, as "things human" were by the Senate in the *Curia Hostilia* by the *Forum Magnum* The *Sacellum Larum* may possibly be the "*ædes Larum in Summa Sacra Via*" mentioned in the Ancyræan inscription (see p. 248) as being rebuilt by Augustus.

The last point mentioned by Tacitus is the *Forum Romanum,* marking the northern angle of the circuit;[1] this brings the line to the valley of the *Velabrum,* which bounded the whole north-west side of the Palatine, and so to the starting-point in the *Forum Boarium.*[2]

It will be seen that this description of the circuit of *Roma Quadrata* leaves uncertain the whole boundary of the south-east side, that opposite the *Velabrum;* and to determine this we can only have recourse to a few other passages in classical authors which mention the circuit, and to the existing remains of the ancient wall.

The Palatine Hill, before its surface was levelled during the construction of many of the extensive palaces which, under the Empire, occupied its whole summit, was divided

[1] According to one method of punctuation, the words "*Forum Romanum*" are coupled with "*Capitolium,*" as being parts outside the city of Romulus, which were added by the Sabine king Tatius; but it is more probable that the passage ought to run as given above.

[2] The circuit of *Roma Quadrata* as described by Solinus (cap. i.) is unintelligible, and was written at a time when tradition on this point had become very vague:—"*Dictaque est primum Roma Quadrata quod ad æquilibrium foret posita. Ea incipit a sylva quæ est in Area Apollinis et ad supercilium Scalarum Caci habet terminum, ubi tugurium fuit Faustuli; ibi Romulus mansitavit.*"

into two parts by a natural valley, which ran from near the *Arch of Titus* and the *Porta Mugonia* the whole way across it, to the side of the *Circus Maximus.*[1]

The point which has been most disputed is, Whether the primitive *Roma Quadrata* occupied the whole summit of the Palatine, or whether it was confined to the half of the hill on the *Velabrum* side? The latter theory was adopted by Comm. Rosa (see *Ann. Inst.* 1865, p. 346). There is, however, very strong evidence to show that the former supposition is the true one, and that *Roma Quadrata* was really co-extensive with the whole hill. Cicero (*De Rep.* ii. 6) says: "*Murum Romuli . . . definitum ex omni parte arduis præruptisque montibus;*" and Aulus Gellius (xiii. 14) also says: "*Antiquissimum Pomœrium . . . Palatini montis radicibus terminabatur.*" This language would certainly not apply to a city which occupied one-half of the Palatine only. Recent excavations have, moreover, exposed remains of the primitive wall at several points along the southern half of the hill—both a little to the east of the supposed site of the *Porta Mugonia*, and also near the so-called *Domus Gelotiana*, on the slope towards the *Circus Maximus.* At this point a projecting spur of the wall issues at right angles to the main line, and looks very much as if it crossed the hill at this point; but further excavations showed that it again turned to the south-east, and continued along the cliff in the direction of the Palace of Severus (see fig. 10), making it almost certain that the so-called "Wall of Romulus" really included the whole circuit of the Palatine.

Existing Remains of "the Wall of Romulus."[2]

The very primitive date of this once massive circuit-wall is shown both by the character of its masonry and by the

[1] For an account of the buildings which filled and covered this valley see pages 92 and 117.

[2] This name is a convenient one to use in spite of the unhistoric character of the early traditions about the founding of Rome.

manner in which it is set with reference to the natural line of the cliff; in both respects exactly resembling the fortifications of many very ancient Etruscan cities. The natural strength and adaptability for defence of the Palatine Hill were skilfully and with great labour much increased in the following manner:—

The base of the circuit wall was set neither at the foot of the cliff nor at its summit, but on an artificially cut shelf, at an average distance of about 40 feet from the top. The tufa cliff

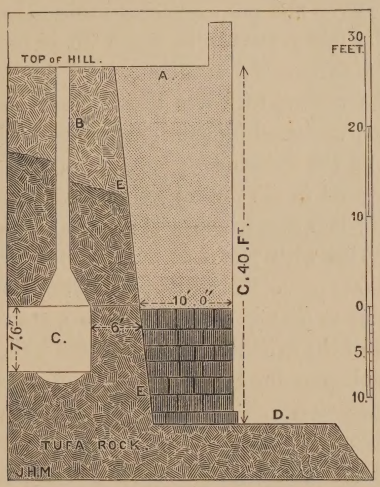

Fig. 4.

Section of primitive wall of Roma Quadrata.

A. Original height of wall.
B. Upper part of cliff, now crumbled away.
C. Cistern cut in the tufa rock.
D. Levelled platform to receive base of wall.
EE. Cliff made steeper by cutting.

above this shelf all round the circuit, where the natural contour of the rock was at all abrupt, was cut into an almost perpendicular precipice, slightly battering or sloping back towards the hill (see fig. 4). On this long rock-cut shelf the wall was built against the face of the artificially scarped cliff, rising to

the summit of the hill, and probably a little above it, sufficiently high to protect the garrison from missiles thrown from below. The accompanying figure shows the section of the wall and cliff at the point where it is still most perfect. The wall is ten feet thick at the base, and grew rather thicker as it went up, owing to the cliff behind leaning away from it. The wall was in fact a sort of "retaining wall," except that it was not built to hold up the ground behind it, but in order to insure a more even and perpendicular surface than that of the cliff itself; the many fissures in which would easily have supplied foothold to external assailants. In other parts of the hill, where the natural rock was not so steep, the circuit wall may have been arranged differently; but no example of this now remains on the Palatine.[1]

The stone used in the wall of Romulus was quarried on the Palatine itself; it is that friable sort of warm brown tufa which is thickly studded with pieces of pumice stone and masses of charred wood (see p. 2). These lumps, varying usually from the size of a walnut to that of a man's two fists, are very visible in all the blocks of the existing remains of this wall. As is mentioned in the chapter on Roman methods of construction, the blocks of which this wall is built were cut with metal tools, no doubt of bronze,—two kinds of which were used, namely, sharp-pointed picks, and chisels varying in width from $\frac{1}{4}$ to $\frac{1}{2}$ inch. The courses are roughly two Roman feet thick, varying (that is) from 22 to 24 inches; their width across the ends varies from 18 to 22 inches (average about 21 inches); the lengths are extremely irregular, ranging from 3 feet 3 inches to 4 feet 10 inches. The blocks are roughly "hammer-

[1] The almost equally primitive wall of the *Capitolium*, of which remains exist on the (popularly called) *rupe Tarpeia*, was set at the edge of the cliff at its summit, the rock below being cut into a perpendicular precipice. The Capitoline tufa is harder and more regular in texture than that of the Palatine, so that no artificial wall could improve on it when it was quarried into a smooth surface.

dressed" on the exposed face; but in all cases the beds or horizontal joints are worked very truly, while the vertical joints are in some instances left with a considerable space be-

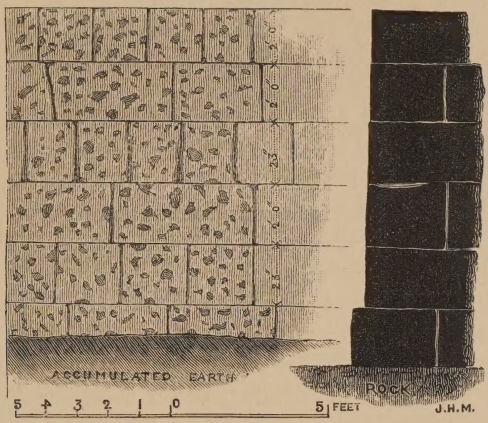

Fig. 5.
Existing piece of the "Wall of Romulus."

tween two blocks; in most cases, however, they are fitted fairly accurately. In many instances the blocks are worked with hollow joints—cut, that is, so as to fit accurately at the exposed edge only. No mortar or any kind of clamps are used—a sign of very early work; in certain places in the later wall of the Kings a thin bed of mortar is used. In most cases, though not always, the blocks are set in *emplecton* work, first, that is, a course of *stretchers* (blocks set lengthways), and then a course of *headers* (blocks set endways).

The chief remains of this wall exist at the western angle of the hill (near the modern entrance to the Palatine); and in places where the wall itself is gone, imprints of its blocks remain visible on later concrete walls which have been built against it. All along the north-west side (toward the *Velabrum*) pieces of the "Wall of Romulus" exist, embedded in the walls

of houses of the late Republican and early Imperial periods, which were built in a long row extending along the shelf at the foot of the wall. When these houses were constructed the greater part of the then useless fortification wall was pulled down, and its blocks were probably used in the walls of the later houses; where, however, the blocks of the ancient wall came into the right place for the walls of the later houses they were left and incorporated into the row of dwellings. Pieces of the primitive wall exist at nearly regular intervals of about 12 feet, embedded in the later walls of concrete faced with *opus reticulatum*,[1] for a considerable distance opposite the round Church of S. Teodoro. And other pieces exist in the many-storied building near the west angle, especially by and under the long flight of brick and concrete stairs leading up to the summit of the hill.

Another long piece of this primitive wall also exists incorporated into part of the so-called *Domus Gelotiana*, about halfway along the side overlooking the *Circus Maximus*. This piece is rather difficult to understand, as it appears to project a long way from the main line of the circuit, running in a diagonal direction down the slope towards the Circus. Other portions of the wall were discovered a few years ago near the supposed site of the *Porta Mugonia*, and immediately below the lofty *Podium* of the Flavian Palace. Exposure to rain and frost has unfortunately destroyed nearly the whole of these interesting remains, which have now sunk into a shapeless heap of volcanic earth.

A very interesting reservoir for rain and spring water, of very early date, exists at one point towards the *Velabrum*, behind the "Wall of Romulus."[2] It is shown in section on

[1] The regular occurrence of these pieces of ancient masonry looks as if there had been at this part a row of buttresses projecting from the face of the "Wall of Romulus."

[2] An almost exactly similar rock-cut cistern and well-shaft, also of very great antiquity, exists near the site of the ancient Alba Longa.

fig. 4, and its position is indicated by No. 8 on fig. 10. The wall of Romulus in front of it is now mostly gone, and an entrance which did not originally exist has been broken into this rock-cut cistern through the face of the cliff; but as it was originally formed it had no access except from the top of the hill down two circular well-shafts. Under one of these a round basin is cut in the rock into which buckets let down from above would fall. This extensive rock-cut cistern was probably intended specially for use during siege, so that the inhabitants of *Roma Quadrata* might not be starved out from want of water. Other quarry cisterns with well-shafts of a later date are mentioned below (see p. 88–90).

A long passage with a semi-circular roof, leading from this circular cistern, runs inwards under the hill for a considerable distance, but it has not been completely cleared of rubbish. At another point in the cliff, nearer to S. Teodoro, another long passage, about 2 feet 6 inches wide and 7 feet high, is excavated in the tufa hill for a long distance, winding about in a very curious way. It is still partly choked with earth, and its use is not apparent. In this long passage the nature of the tufa which composes the core of the Palatine can be well examined. Here the rock is of a light yellowish colour, very soft and homogeneous, quite free from fissures, and un mixed with any pumice stone or charcoal. It probably belongs to an earlier formation than that of which the "Wall of Romulus" at the western angle is built.

Gates in Roma Quadrata.

According to the ancient Etruscan custom every walled city had at least three gates, dedicated to the three chief deities of Etruria—*Tinia*, *Thalna*, and *Menvra* (Jupiter, Juno, and Minerva). See Servius *Ad. Æn.* i. 422. Varro (*Lin. Lat.* v. 34) describes three gates in the Romulean wall thus :—

Prœterea intra muros video portas dici—in Palatio "Mugionis"

a mugitu, quod ea pecus in bucita circum antiquom oppidum exigebant. Alteram "Romanulam," quæ est dicta ab Roma, quæ habet gradus in Nova Via ad Volupiæ sacellum. Tertia est "Janualis," dicta ab Jano: et ideo ibi positum Jani signum. See also Plut. *Rom.* 9; Dionys. ii. 65; Livy i. 7 and 9.

The *Porta Mugonia* is mentioned by Solinus (i. 24) as being above the *Summa Nova Via*. Near it was the house of Tarquinius Priscus, whose house is elsewhere recorded to have been near the Temple of Jupiter Stator. Remains of what was supposed to be the *Porta Mugionis* or *Mugonia* were discovered during excavations made by Rosa for Napoleon III., together with a lava-paved road leading up to the Palatine from the *Summa Sacra Via*, and this attribution was confirmed in 1883–4 by the discovery of the *Summa Nova Via* where it joins the Palatine road close by the Arch of Titus (see fig. 10).[1] This gate is probably the *Veterem Portam Palatii* of Livy, i. 12, through which the Romans fled when repulsed by the Sabines of the Capitol. Varro's derivation of the name *mugionis*, from the lowing of oxen, is very improbable, as is also that given by Festus (Ed. Müller, p. 144).

The derivation of the name of the second gate, *Romanula* or *Romana*, is explained thus by Festus, p. 262—"*Sed Porta Romana instituta est a Romulo infimo clivo Victoriæ, qui locus gradibus in quadram formatus est; appellata autem Romana a Sabinis præcipue, quod ea proximus aditus erat Romam.* These indications enable the site of this gate also to be identified, with some probability, as having been at the lowest point of the road where it passes from under the lofty substructions of Caligula's Palace. That this road was the *Clivus Victoriæ* is very probable, from the discovery near it of the Temple of

[1] See p. 93 for a description of the remains, which are supposed to belong to the *Temple of Jupiter Stator*, close by the *Porta Mugonia*. The soft tufa blocks, of which the supposed remains of this gate were built, have now wholly crumbled away, though they were sharp and well preserved when they were exposed about the year 1868.

Victory (see p. 109).[1] It is at the corner nearest the Capitol, in accordance with the indication of Festus, and almost its exact position on the *clivus* is given by continuing the line of the cliff and the remains of the "Wall of Romulus" on the north-west side of the hill. The original approach to this gate apparently was from a road sloping up the lower extra-mural part of the hill from the direction of the *Velabrum*. In later times a more direct ascent was made to it from the *Forum magnum* by a flight of steps, of which remains still exist, and which are shown on the marble plan (see p. 137, fig. 10, and plate of the Forum).

The *Porta Romanula* was probably destroyed long before Caligula built his palace over the *Clivus Victoriæ*.

Of the position of the third gate, called *Janualis* by Varro, nothing is known, and indeed it appears doubtful whether the *Porta Janualis* was on the Palatine at all. Macrobius (*Saturn.* i. 9) speaks of it as being on the slopes of the Viminal Hill.[2]

It is very probable that *Roma Quadrata* possessed at least one entrance on its southern half, and judging from the contour of the ground it appears likely that this gate was at some point under the existing substructures of Severus's Palace, probably where the road descends from the end of the great Stadium, passing under the palace to the valley between the Palatine and the Cælian Hills.

One entrance through the primitive wall of *Roma Quadrata* still exists on the side of the *Circus Maximus*. This is not a chariot road but a long flight of steps cut in the rock, and would not therefore rank as one of the three chief gates to the

[1] What appears to be part of this road is represented on a fragment of the marble plan with the inscription CLIVVS VICTORIAE, but the buildings shown near it cannot be identified with any of the existing remains.

[2] For an account of the walls and gates of *Roma Quadrata* see Becker, *De muris et portis Romæ*, Leipsic, 1842; *Ann. Inst.* 1857, p. 62, and *Ann. Inst.* 1871, p. 40; and *La fondazione di Roma* in *Bull. Comm. Arch. Rom.* 1881, vol. ix.

city. This is probably the *Scalæ Caci* of Solinus i. 18, and the Κάκου ἄκτη of Plutarch (*Rom.* 20).[1] It is a broad flight of steps quarried in the tufa rock, and lined at the sides with a wall of roughly cut blocks of soft tufa like the rest of the "Wall of Romulus." On one side of these stairs are a number of early tufa buildings, described below (see p. 86). The wall on the opposite side is a restoration in concrete of Imperial date, probably of the time of Caligula, who is recorded to have restored these stairs. In later times the ancient rock-cut steps appear to have been covered with a pavement of polygonal blocks of lava, a few of which still remain near the top. The name of the gate which once existed at the foot of these stairs is not known.

Probably not far from the *Stairs of Cacus*, near the western angle of the hill, was the *Lupercal*, a large cave in the rock, shaded with trees, traditionally dedicated by the Arcadians, under Evander, as a shrine to *Lupercus*, probably a native Latin deity, who was afterwards identified with the Greek Pan.[2] According to the story this was the den of the she-wolf that suckled Romulus and Remus. See Dionysius (i. 32, 79) who quotes the early Roman historian Q. Fabius Pictor. Lupercus was a god specially worshipped by shepherds as the protector of their flocks against wolves.

In later times the *Lupercal* was transformed into some sort of building; possibly its entrance was adorned with columns and an entablature supporting sculpture, like the *Choragic monument of Thrasyllos* at Athens, of 320 B.C., which forms the entrance to a cavern excavated in the rock of the Acropolis. The Ancyræan inscription records its rebuilding by Augustus;

[1] The name of these stairs was said to be derived from a certain Cacius who lived by them; not from the fabulous robber, Cacus, who lived in a cave in the Aventine, and was killed by Hercules after his crafty theft of the oxen. (See Servius, *Ad Æn.* viii. 90, and Propertius, IV. i. 9.

[2] The exact position of the *Lupercal* is unknown; what Mr. Parker mistook for it was the *Castellum* or *piscina* of an aqueduct.

see p. 248. Near it was the fig-tree under which the twins were stranded by the retiring waters of the Tiber. This fig-tree, called *ficus ruminalis*, from *rumes*, the teats of the she-wolf (Festus, *Ed. Müller*, p. 400),[1] was miraculously transported to the *Comitium* by the Augur Attus Navius, and a tree which passed for the original one existed till the times of the Empire. Near it the Ædiles Cnæus and Quintus Ogulnius, in 296 B.C., dedicated the bronze statue of the wolf suckling the twins (Liv. x. 23); this is very probably the statue, of Etruscan style, which is now in the Capitoline Museum; the infants are modern.[2] Also near the western angle of the Palatine, on the side towards the Circus Maximus, stood the *casa Romuli*, or hut of Romulus (Dionys. i. 79; Plut. *Rom.* 20). Dion Cassius records that it twice caught fire during the reign of Augustus (xlviii. 43 and liv. 29), so even then some primitive thatched wooden hut was probably preserved as a sacred relic of the founder of Rome. It appears probable that at some time this hut was moved to the Capitoline Hill, as Vitruvius (ii. 1), M. Seneca (*Contr.* i. 6), Macrobius (*Saturn.* i. 15), and the Greek historian Conon, quoted by Photius (*Bibl.* 186), all distinctly mention it as being on the *Capitolium*, while it seems clear that there was not more than one hut of Romulus (see Ovid, *Fast.* iii. 183; Val. *Max.* xiv. 4; and Livy, v. 53).[3] In this last passage this famous hut, with its sacred memories—"*casa illa conditoris nostri*"—is mentioned in the eloquent speech made to the Senate by the dictator, M. Furius, in 390 B.C., after the Gaulish invasion, when the proposal was being discussed as to whether the people should desert Rome and migrate to Veii. In this impassioned speech the dictator appealed to the Senate

[1] A goddess called *Rumia* presided over the suckling of children.

[2] A representation of this or a similar group occurs very frequently on the reverses of early Roman *denarii*.

[3] The regionary catalogues mention it among the contents of Regio X. or Palatina, but many objects are catalogued in these lists which had ceased to exist in the places named.

not to desert this and other sacred spots in their ancient and holy city. Another relic of the primitive city was preserved at this part of the Palatine under the name of the hut (*tugurium*) of Faustulus, the shepherd who found and adopted Romulus and Remus. It is, however, possible that this is only another name for the *casa Romuli*.

In addition to the stone wall built round *Roma Quadrata*, Romulus is also said to have surrounded the Capitoline and Aventine Hills with an *agger* and *vallum* (Dionys. ii. 37); but this method of fortification appears quite unsuited to places such as these, with precipitous sides,[1] and no traces of it now exist. It is very doubtful whether Dionysius is right on this point.

The Regal Period.

Traditionally 753 to 509 B.C. The remains of various structures, which were the work of the later kings of Rome, may mostly be said to come within the beginning of a real historic period, founded on something more than dim and half mythological traditions.[2] The most important of the existing remains of this early period is the great circuit wall, by which a number of isolated towns or village forts, on separate hills, originally occupied by independent communities, were linked together and formed into one large city by the fusion of several different races and tribes into a united people, under one president, who was elected, not for a term of years

[1] This method of fortification was specially used on level ground, where the garrison had no natural advantages of position; a deep trench (*fossa*) was dug, and the earth from it was heaped up into a bank (*agger*) on the inner side, on the top of which a wooden palisading (*vallum*) was fixed. The *agger* of the later kings was supported by a massive retaining wall, which rose above it, instead of the wooden fence (see p. 69).

[2] It need hardly be said that this can only be called a historical period in a very modified sense. It is, for example, impossible that only seven kings, some of whom were elected late in life, can have reigned so long as 244 years.

but for life, and was dignified with the name of king.[1] The great wall, many pieces of which still exist, is the large circuit of fortification said to have been begun by Tarquinius Priscus, and mostly built by Servius Tullius (see Livy, i. 36 and 38; and Dionys. iii. 37); it enclosed seven of the hills of Rome, embracing all those which had already been included in the city, namely, the Palatine, the Capitoline, the Aventine, the Quirinal, and the Cælian; and included two others—the Esquiline and the Viminal (see Varro, *Lin. Lat.* iv. 41 and vi. 24). It is probable that certain parts, such as some of the existing wall on the *Capitolium*, may belong to the earlier fortifications, those, that is, which enclosed each separate hill, but the main part of the existing remains of this great work certainly belong to the comprehensive circuit which was said to have been planned by the Greek, Tarquinius Priscus.

In addition to the fortified group of seven hills known as the *Septimontium*,[2] there was also, on the other side of the Tiber, a separate fort on the Janiculan Hill, remains of which still exist near the church of *S. Pietro in Montorio*. Access to this was given by the wooden *Pons Sublicius*, with which it was connected by long walls, probably resembling on a small scale the celebrated *long walls* which united Athens to its harbours of *Piræus* and *Phalerum*. This is said to have been the work of Ancus Martius (see Livy, i. 33).

The space included in the enlarged circuit was divided by Servius Tullius, for religious, military, and political purposes,

[1] The principal races thus fused into one people appear to have been Etruscans, Latins, Sabines, and Greek colonists; it was, of course, a long time before the individuality and race jealousy of each lost itself in the compact unity and solidarity of the *Populus Romanus*. It is a notable fact that only two of the kings are said to have been of Latin race—Romulus and Tullus Hostilius, a fact which throws much doubt on the traditional supremacy of the Latins among the allied tribes.

[2] The word *Septimontium* originally had a rather different meaning (see Plut. *Quæs. Rom.* 69; and Burn, *Rome and the Campagna*, p. 37).

into four *regiones* (Varro, *Lin. Lat.* iv. 46 to 54), each of which contained six parishes, and each parish a shrine known (for what reason is doubtful) as an *Argive* or *Argean Chapel* (*Argeorum Sacraria*). These, however, existed previously to the *regiones* of Servius, and are said by Varro to have been founded by Numa.

The following were the *regiones* of Servius :—

I. SUBURANA, which included the Cælian[1] Hill, the Carinæ, the Sacra Via, the Subura, with the slope of the Esquiline immediately above it, and probably most of the valleys adjoining the Cælian. Varro, quoting Junius, derives *Suburana* from *sub urbe*.[2]

II. ESQUILINA, including the Esquiline Hill, with its spurs the Oppius and the Cispius. Varro suggests that Esquiline is derived, "*ab excubiis regis*." It really means the dwellers "outside," *es-quil-iæ ;* the same root occurs in *in-quil-inus*, "dwellers within."

III. COLLINA, including the Viminal and Quirinal Hills, which were called *colles* in contradistinction to the other five hills, which were called *montes*.

IV. PALATINA, the Palatine Hill, and its outlying parts the Germalus or Cermalus, and the Velia (see p. 134). One of Varro's derivations of the *Palatium* or Palatine Hill is from the Greek hero Pallas, who came to Italy with his father Evander.

[1] So called, Varro says, from the Etruscan chief Cælius Vipenna, Romulus's ally against the Sabine Tatius, who with his followers settled on this hill, and remained there till they were moved by the jealousy of the Romans to the valley near the *Velabrum*, on the road which was afterwards called from them the *Vicus Tuscus*, or Etruscan Street.

[2] The *Subura* was the valley from whence the *Cloaca Maxima* started, and was close under that part of the Esquiline which was called the Carinæ, probably the ridge where the church of S. Pietro in Vincoli now stands ; a flight of steps now leads down to the valley of the *Subura*, from the piazza in front of the church.

It will be observed that these four *regiones* do not include the Aventine, the Capitoline, and some of their adjacent valleys, an omission for which it is very difficult to account, as they were included in the Servian circuit. Becker suggests that the Capitoline Hill was excluded on account of its sacred character, while the Aventine was not yet thickly populated, and the Janiculan was only occupied by a fortress (see *Handbuch*, i. p. 386, and *Ann. Inst.* 1861, p. 61.

The line of the Servian Wall and its Gates (see Map of Rome). Excavations made during the last fifteen years have done much to determine the circuit of this massive wall. Great portions of it have been discovered and then destroyed during the extensive works of levelling and digging foundations for the new quarter which has been laid out on the Quirinal, Viminal, and Esquiline Hills.[1]

At one point, for a short distance, the Tiber formed the defence of the city, and here there was no wall, but a massive stone embankment or quay, the κάλη ἄκτη of Plutarch (*Rom.* 20), formed of great blocks of tufa in the usual two foot courses; in this the arched exits of the *cloaca maxima* and other smaller drains are still well preserved, and can be seen from the *Ponte rotto* or *Pons Cestius*. Near this bridge the wall started from the river bank and ran inland to the *Capitolium*, between the *Forum olitorium* on the outside, and the *Forum boarium* inside the city. In this short length where it crossed the plain between the river and the Capitol, there were three gates.

(i.) *The Porta Flumentana* (*river gate*). This was close to the bank of the Tiber, near the back of the so-called "House of Rienzi." (See Cic. *ad Att.* vii. 3, and Livy, xxxv. 19 and 21).

(ii.) *Porta Triumphalis*, the exact site of which is unknown; it is usually only mentioned in connection with triumphal pro-

[1] Unhappily, in very few instances, have these priceless remains of the early history of Rome been saved from utter destruction.

cessions (see Cic. *in Pis.* 23, and Josephus, *Bell. Jud.* vii. 5, 4). It probably was not used except on those occasions when processions in honour of victorious generals passed from their starting point in the *Campus Martius* to the *Sacra Via*, and so up to the Capitoline Hill.

(iii.) *Porta Carmentalis*, in the wall at the foot of the *Capitolium* (see Solinus, i. 13; Livy, ii. 49, xxiv. 47, xxv. 7; and Ascon ad. Cic. *In toga*, Orell. p. 90). This gate was named from an altar to the nymph Carmenta, the mother of Evander (Virg. *Æn.* viii. 337). According to the note of Servius on this passage, its name was afterwards changed to the *Porta Scelerata*, because from it the ill-fated Fabii set out to fight the people of Veii on the banks of the river Cremera, in 478 B.C. (Livy, ii. 49).

The whole Capitoline Hill, including the *Capitolium*, the *Arx*, and the intermediate depression called the *asylum*, was already surrounded with a complete wall of its own, and was incorporated as a link in the chain of forts which were united by the wall of Servius. Several parts of this primitive fortress-wall still exist, and are now exposed to sight.[1] One of these is at the top of what is popularly called the Tarpeian rock, and can be seen from the foot of the cliff at the end of the *Vicolo della rupe Tarpeia.* A short piece, about six courses high remains, set at the edge of the perpendicularly scarped rock.[2] Remains of a part of the wall where it skirted the *Asylum* were exposed during the recent formation of a winding carriage road up from the *Campus Martius.* At this point the

[1] Dionysius, ix. 68, speaks of these early fortifications being set—"ἐπὶ λόφοις . . . καὶ πέτραις ἀποτόμοις."

[2] It should be remembered that till as late as the fourteenth century there was no access to the Capitoline Hill on this side. Both the great flights of steps which now lead up, one to the central *asylum*, and the other to *Ara Cœli* (the *Arx*), are of mediæval date. The three entrances mentioned by Livy (iii. 7, v. 26, and 28; and Tac. *Hist.* iii. 71, 72), were all from the interior of the city, on the side towards the *Forum Magnum.*

wall was set, like that of *Roma Quadrata*, not at the highest point, but on a shelf cut about half way down the slope.

A third piece of wall, five courses high, has recently been exposed on the rock above the Mamertine prison, opposite the north-east end of the *Tabularium*, and separated from it by the steep road which leads past it from the *Temple of Concord*, up towards the *Asylum* and the church of *Ara Cœli*. This is built of soft reddish tufa, and possibly belongs to the original fortification of the *Arx*.

From the Capitoline *Arx* the wall of Servius passed to the Quirinal along a spur of elevated ground which once linked together these two hills. This rocky spur, together with a large portion of the slope of the Quirinal, was completely cut away by Trajan to form a level site for his great Forum and Basilica (see p. 269), so that here no traces exist of the ancient wall.

Close under the cliff of the *Arx* was the *Porta Ratumena*, so called from a chariot-driver whose horses ran away during races at Veii, and did not stop till they came to Rome, and here upset the car and killed him (Pliny, *Hist. Nat.* viii. 42, and Plut. *Pobl.* 13). At this gate, the *Via Lata*, modern Via di Marforio, issued from the city, and in it, close without the gate, are remains of the tomb of Bibulus, and other tombs, built into the modern houses.[1] Remains of the wall and the *Porta Ratumena* have been discovered under the house in the *Via di Marforio*, numbered 81 C and 81 E.

After passing Trajan's Forum the next existing piece of the wall is on the slope of the Quirinal, in the gardens of the Colonna Palace, under the Baths of Constantine; and near here, towards the foot of the Quirinal, was the *Porta Fontinalis* (Livy, xxxv. 10).

In the middle of the new Via Nazionale a small piece of the wall has been preserved, and close by it, in the Palazzo

[1] In later times the ascent from the Forum to this gate was called the *Clivus Argentarius*.

Antonelli, are further remains, with a massive stone archway, which has been supposed to be the *Porta Fontinalis.* It seems, however, small for one of the principal gates, being only 6 feet 6 inches wide, and 5 feet 2 inches to the springing of the arch.[1] The courses of the wall here vary from 19 to 23 inches in depth; the arch is in one stone ring, 1 foot 11 inches deep; it stands on concrete foundations. In late times, under the Empire, another ring of brick and concrete has been added over the stone arch.

The next gate—the *Porta Sanqualis*—was also on the Quirinal; Festus (Ed. Müller, p. 345) calls it "proxima ædi Sanci"; from this temple its name was derived (see also Livy, viii. 20). In 1866 the position of this gate was determined on the slope between the Trevi fountain and the Quirinal Palace by the discovery of some roadside tombs, which were immediately outside the line of the wall, thus showing the line of the street which issued from the gate. The next part of the wall passed under the modern palace, and through the gardens of the Quirinal; no further remains are known till the garden of the Barberini Palace is reached, where a small piece of wall exists at a point where there was once an abrupt cliff, now cut away.

A little beyond this, near the Quattro Fontane, was the *Porta Salutaris;* this was named from a *Temple of Salus,* built in 306 B.C. by the censor C. Junius Bubulcus, on the site of one of the primitive *Argean Chapels* (Livy, ix. 43; and Festus, Ed. Müller, p. 327).[2]

Extensive remains of the wall have been recently discovered and destroyed in and near the Villa Barberini, where the wall skirted the *Horti Sallustiani,* on the north side of the street

[1] Livy, xxxv. 10, mentions that a long porticus was built by the Ædiles outside this gate in 193 B.C., reaching from it to the Altar of Mars, in the *Campus Martius.*

[2] The names of this and others of the Servian gates are much later than the time of Servius; what their original names were is not known.

now called *Via del Venti Settembre.* At this point there was a rocky cliff, at the foot of and against which was built the magnificent house thought to be the Imperial Villa which originally belonged to the historian Sallust.[1] The Servian wall skirted the edge of this cliff, and then turned southwards at a right angle, passing under the new *Ministero delle Finanze.* During the excavations made for the foundations of this building the *Porta Collina* was discovered, not on the line of the present road to the *Porta Pia*, but a little to the south of it.

The *Porta Collina* was one of the chief gates of Rome, and from it issued the main road to the country of the Sabines[2] (see Dionys. ix. 68; Strabo, v. 3; and Livy, ii. 11). Thus far in its course from the Tiber the Servian wall mostly skirted the edges of hills, once much more precipitous than they are now, but from the angle by the *Horti Sallustiani* for a long distance southwards the wall had to cross a level plain. On this account the *Porta Collina* was the gate which was most frequently attacked by foreign enemies: as, for example, by the Gauls in 360 B.C., by Sylla in 88 B.C., and by the Democrats and Samnites in 82 B.C., when it was the scene of one of the bloodiest battles that occurred in the history of the Republic.

Hannibal, too, encamped outside this gate when he was preparing to make an attack on Rome, which might have been successful if his courage had not failed, causing him to retreat after throwing one javelin at the city (see Mommsen, *Hist. of Rome*, iii. pp. 264, 318, and 340).

[1] This deep valley, which separated the Quirinal from the eastern part of the *Collis Hortorum*, or Pincian Hill, is now being filled in with rubbish, to make a level building site for new boulevards, under the scheme called the *Piano regolatore*, the carrying out of which has already caused the destruction of a great quantity of valuable ancient remains.

[2] The *Porta Collina* was also called *Agonalis* or *Quirinalis.*

The Agger of Servius.

On account of the circuit of the city for a long distance, from the angle near the Colline Gate to the most southern part of the Esquiline Hill, having to pass over a level plain, where the inhabitants of the city had no natural advantage of position, a different and more elaborate method of fortification was adopted, in order to gain by artificial means the strength which elsewhere was given by the contour of the ground.[1]

Along this plain was constructed the great *Agger* and *fossa*, which was considered one of the chief wonders of Rome. It is described with some minuteness by Dionysius, ix. 68; and the accuracy of his account of it has been proved by recent discoveries. It is also mentioned by Strabo, v. 3, who gives its length as 6 stadia, not 7, as Dionysius does. Its position at the junction of the Quirinal, Viminal, and Esquiline Hills is accurately described by Livy, ii. 44.

Besides the *Colline Gate*, the *Agger* had two others, namely, the *Porta Viminalis*, out of which issued the road which passed through the existing closed gate (*Porta Chiusa*) in the wall of Aurelianus. Its exact position was discovered in 1872 by the exposure of the lava-paved road which passed through it, very nearly in the middle of the *Agger*—ὑπὸ μέσῳ τῷ χώματι, as Strabo says.

The other gate in the *Agger*—the *Porta Esquilina*—was discovered in 1876; its foundations are in contact with the existing *Arch of Gallienus*, which was built against it on the outside. The adjoining church of S. Vito is very largely built of blocks taken from the retaining wall of the *Agger*. Near it, on the outside, was the *Campus Esquilinus*, once a squalid cemetery for slaves and the poorest classes, which was laid out as gardens by the wealthy Mæcenas, who built himself a

[1] Close outside the *Colline Gate* was the *Campus Sceleratus*, in which erring Vestals were buried alive.

magnificent villa at this place. The improvement of this quarter near the *Agger* is mentioned by Horace, *Sat.* i. 8, 14 :—

> "*Nunc licet Esquiliis habitare salubribus, atque*
> *Aggere in aprico spatiari.*"[1]

The further course of the wall from the southern end of the *Agger* across the Esquiline and the valley of the Colosseum is the least known part of the circuit. It appears probable from the contour of the ground that it first skirted the *Mons Oppius*, one of the spurs of the Esquiline, along the modern Via Merulana.

Probably in the valley was the *Porta Querquetulana*, and a little beyond it, on the Cælian Hill, the *Porta Cœlimontana*. After crossing the Cælian, the wall turned westwards along its southern cliff, and then crossed the valley which was partly occupied by the *Circus Maximus*. In this valley was the *Porta Capena*, foundations of which were discovered by Mr. Parker not far from the church of S. Gregorio, together with remains of the Marcian Aqueduct which passed over it; from the leaking of this aqueduct it was called *madida*, "the damp gate," by Juvenal, iii. 11; and Martial, iii. 47. From the *Porta Capena* issued the *Via Appia*, the oldest of the Roman paved roads, and a little way outside the gate the *Via Latina* branched off to the left. Several large temples stood near this gate, two dedicated to Mars, and one to *Honos et Virtus* (Honour and Valour), founded by Marcellus after his capture of Syracuse with its rich spoils of Greek art, in 212 B.C. (Livy, xxv. 40). It was dedicated in 208 B.C., after some difficulties had been raised by the *Pontifices*, on the ground that a single *Cella* should not be consecrated to two deities,

[1] Remains of what is supposed to be the Villa of Mæcenas have been exposed, built close against the ancient wall of Servius (see p. 404). A large apsidal-ended room, with recesses and stages for flowers, built with neat *Opus reticulatum* facing, is the best-preserved part; it stands close to the road between the basilica of S. Maria Maggiore and the Lateran (Bull. *Comm. Arch.* ii. p. 137).

because if it were struck by lightning, or if any prodigy occurred in it, it would be difficult to know to which of the two gods the sign should be attributed. On this account a separate chamber for *Virtus* was added (see Livy, xxvii. 25).

Like the *Porta Fontinalis* and the *Porta Trigemina* (Livy, xxxv. 10), this gate had a long porticus outside it, reaching to the *Temple of Mars*, in which the Senate met on several occasions (Ov. *Fast.* vi. 191).[1]

After crossing the valley of the *Via Appia*, the wall reaches the Aventine Hill, and forms a loop, encircling all except the northern part of the hill.

Several fine remains of the wall exist on the Aventine, especially a piece of 11 courses high, near the church of S. Balbina; another very noble length of wall, 25 courses high, containing a fine arch, exists in the Vigna Torlonia, not far from the Baths of Caracalla (see below, p. 74); a third piece exists near the church of S. Sabina.

Under the Aventine the wall appears to have touched the river near the foundations of a bridge, which are still visible, especially when the water is low; this is probably the Sublician Bridge, the first built in Rome, made to connect the main city with the Janiculan fortress (Livy i. 33). At this point, close by the river, was the *Porta Trigemina* (see Livy, xxxv. 10; Solinus, i. 8; and *Ann. Inst.* vol. xxix. p. 64).

Thence to the *Porta Flumentana*, the Tiber, with its massive stone embankment or quay, formed the bulwark of the city; and this completes the circuit to our starting-point near the *Pons Cestius.*

A fragmentary passage of Varro mentions two other gates, one called *Nœvia*, named after a certain Nævius who farmed the land near it, and the other called *Rauduscula*, *i.e.*, the bronze gate, *œs "raudus" dictum.* The sites of these are not

[1] Probably from this temple were taken the fine blocks of white marble used by Honorius in building the lower part of the *Porta Appia*, in the Aurelian wall.

known. Varro appears, according to some editions, to mention a third gate called *Porta Lavernalis*, but here the word *porta* is an insertion, and the phrase "*hinc lavernalis*," merely means that the word is etymologically similar.

Many other gates existed, not in the outer circuit of the wall, but opening from the separate forts into the inside of the city; such as, for example, the *Porta Pandana*, which led from the *Forum Magnum* to the enclosure of the Capitoline Hill.[1]

Existing Remains of the Great Agger of Servius.

The construction of the railway station, and other new buildings has exposed and destroyed a great part of this. One great length of wall is, however, still standing, though the actual *Agger* or bank behind it has been removed, and the rough face of the wall, which was not intended to be exposed, is now visible.[2] Fig. 6 shows the section as actually discovered, agreeing very well with the description of Dionysius, ix. 68, who says that the *fossa* or ditch was 30 feet deep and 100 feet wide at the lowest part. A road ran along the top edge of the *fossa*, and another at the bottom. The earth taken out of this enormous ditch was heaped up to form the *Agger* or bank, and was kept up by a massive stone retaining wall in front, and another lower and thinner wall behind it. The strata of clay, sand, and other kinds of soil, as they appeared on the sloping side of the ditch were traceable in the *Agger*, but of course reversed by the process of digging out and heaping up; the top layer of the ditch being the lowest of the *Agger*.

The wall is built of great blocks of stone, the ἀμάξιοι λίθοι of Dionysius: tufa of several kinds and peperino (*lapis Albanus*) are used, but the former predominates: no mortar or

[1] See a valuable article on the Servian Walls by Comm. Lanciani, *Ann. Inst.* 1871, p. 40 *seq.*

[2] This noble piece of wall is soon to be destroyed, like the rest of the Servian *Agger*.

iron clamps are used, and though the beds are worked very truly the upright joints in some places are rather wide. The blocks average two Roman feet in depth, varying mostly from 22 to 24 inches, and in width from 19 to 25 inches; the lengths are not at all regular, ranging from 3 feet 6 inches to nearly 8 feet.

In some cases the courses do not run evenly, and some of the blocks are set on edge, not on their natural bed, and consequently have split. As a rule the courses are alternately *headers* and *stretchers*. The main wall is 9 feet thick; and a long piece, as much as 30 feet high, still exists. In certain

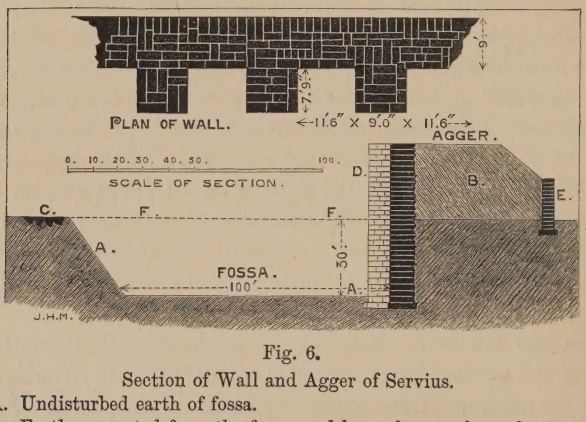

Fig. 6.

Section of Wall and Agger of Servius.

AA. Undisturbed earth of fossa.
B. Earth excavated from the fossa, and heaped up to form the Agger.
C. Road at brink of fossa.
D. Wall and buttress.
E. Back retaining-wall of Agger.
F. Level to which the fossa was filled up, and built upon under the Empire.

The plan is given to double scale.

parts massive buttresses closely set project on the outside (see fig. 6). A large variety of tools have been used in working the blocks, some were chisels as much as $1\frac{1}{4}$ inch wide, others were picks with a sharp point.

The back of the wall, now exposed by the removal of the *Agger*, is quite rough; the front is fairly regular, each block being worked to a sort of bossy surface, in some cases with a smooth band or draught round the joints.

Certain varieties of workmanship occur in the wall of the *Agger*, and it is certainly not all of one date. According to Dionysius it was partly the work of Tarquinius Superbus, having been left incomplete by Servius Tullius.

The *Agger* or bank behind the wall is not of the same thickness everywhere; the dimension given by Dionysius, namely 50 feet including the wall, is probably about the average; the length, which he estimates at 7 stadia, about 1400 yards, corresponds with the actual discoveries.

In some places the *specus* or channels of Aqueducts have been in later times carried through the *Agger*, or in the ground under it. At one point where the *Agger* was exposed, and then destroyed by the laying out of the modern Via del Principe Umberto, the *specus* of three Aqueducts — the *Aqua Julia*, *Marcia*, and *Tepula*, passed along it close together.

A very large collection of masons' marks (see fig. 7) exist on the ends of many of the blocks, at the back of the lofty piece of wall near the railway station; they are very deeply cut in the soft tufa, and frequently occur in groups, as if a whole batch of stones sent at once had all had the same mark; the marks average 10 to 14 inches in height. None appear on the face of the wall, so that when the *Agger* of earth existed they were all hidden.

Some of these marks are single letters, others are monograms, some are numbers, and one is the sign ⋔, which may be the Etruscan CH or the early Roman numeral 50. Many of the characters resemble Etruscan letters, and some are distinctly Greek; the digamma *F*, Π, and the early form of the aspirate ⊟ with closed top occur. Other similar marks exist

on the blocks of the very primitive tufa buildings by the *Stairs of Cacus* on the Palatine.[1]

Under the Empire the great ditch appears to have been filled up, and a row of houses built over it, against the outside

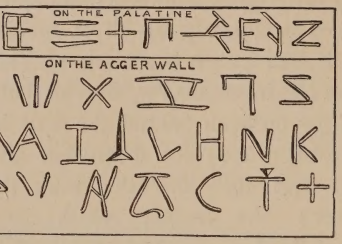

Fig. 7.

Masons' marks on walls of the Regal period. They are 10 to 14 inches high.

of the Servian wall. This filling up probably was done in the time of Augustus; a large part of the Servian circuit wall had at that time been destroyed and built over, so that even then it was not easy to trace its whole line; Dionysius (iv. 13) says. . . *τῷ τείχει τῷ δυσευρέτῳ μὲν ὄντι διὰ τὰς περιλαμβανούσας αὐτὸ πολλαχόθεν οἰκήσεις.*

The remains of these houses against the *agger* wall are built of concrete faced with brick, and the latest sort of *opus reticulatum*, very rudely executed: they appear to have been rows of vaulted rooms two storeys high, and are covered with painted stucco, which also covers parts of the Servian wall where it forms the ends of the various rooms. Brick stamps show these buildings to be of the time of Hadrian; another row of houses was built facing on to the ancient road which skirted the upper edge of the ditch; so the two rows formed a long street occupying the whole width of the filled-in *fossa*. At one point in this street, near the existing lofty piece of

[1] See Bruzza in *Ann. Inst.* 1876, p. 72; and Jordan, *Topographie der Stadt Rom.* i. p. 259.

wall, there is a very curious circular structure, dating probably about the time of Augustus, which Comm. Lanciani thinks has been a sort of water tower or cistern connected with one of the aqueducts.[1] It is a small round tower, built of massive blocks of tufa, with a roof and intermediate band of travertine: it is about 6 feet in diameter inside: its lower part is still buried, but it is about 12 feet high above the present level. Near the top it has a small doorway framed with travertine, with a projecting sill, in which are pivot-holes for a double door opening inwards. It may possibly be a shaft to give access to a subterranean aqueduct.

On the southern slopes of the Aventine, in what is now called the Vigna Torlonia, are some extensive remains of the Servian wall, part of which is still 50 feet high, and 10 feet 6 inches thick. In the upper part of the wall there were semicircular open arches 11 feet 6 inches wide; of which one is perfect and the start of the next exists; their sill is 34 feet above the foot of the wall. (See fig. 8.) The arches are built of a hard red tufa, while most of the plain wall is a very soft and friable yellow tufa. The blocks, which are of the usual two feet courses, are arranged regularly in *emplecton*, of alternate courses of *headers* and *stretchers*. The workmanship is much more careful than in the *agger* wall, the jointing is very neat and accurate, and a thin stratum of pure lime mortar is laid on the joints and beds.[2] Each block is cut with a bossy surface, draughted neatly round the joints. There is no reason for supposing the arches to be later additions, they have every sign of being contemporary with the rest of the wall. The use of these arches is unknown; it has been suggested they are openings in which *balistæ* or catapults were set, possibly to defend an adjacent gateway.

[1] See Lanciani's valuable work on Frontinus and the Roman water supply, Plate vi.

[2] The *Tullianum* is a still earlier instance of the use of thin beds of lime mortar (see p. 79).

In later times, under the early Empire, the wall at this point has been cut through and partly removed to make room for a house with thick concrete walls, faced with *opus reticulatum*, and its large *cloaca* with roof formed of two tiles (*tegulæ bipedales*) set leaning together. Behind the part of the Servian

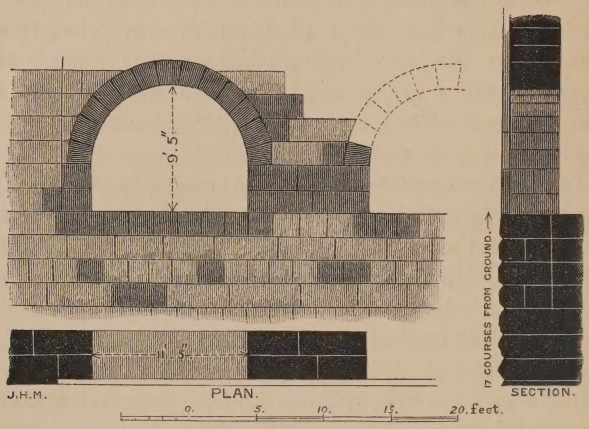

Fig. 8.
Part of the Servian wall on the Aventine.

wall which has the open arches a great mass of concrete backing has been poured in to give additional solidity. This appears to be contemporary with the stone masonry,[1] and if so it is one of the earliest known examples of concrete in Rome.[2]

[1] Concrete was certainly used in Rome so early as the Regal period. Most writers have placed the date of the first use both of mortar and concrete in Rome very much too late.

[2] For further accounts of the Servian Wall see Nibby and Gell, *Le Mura di Roma*, 1820; Becker, *De Romæ Muris*, Leipsic, 1842; and Lanciani, *Ann. Inst.* 1871, p. 40 *seq.*; and *Mon. Inst.* ix. Tav. 27; see also *Ann. Inst.* 1857, p. 62; and *Mon. Inst.* vi. Tav. 4. A little book by Quarenghi, *Le Mura di Roma*, 1880, is mainly an abstract of Lanciani's papers on the subject: compare Vitruvius, i. 5, on walls of fortification.

Cloacæ.

The early *cloacæ* of Rome are said by Dionysius (iii. 68), to have been the work of the Greek Tarquinius Priscus; he describes them as draining every street of Rome, and being works of the most marvellous magnitude. It was the construction of these and later *cloacæ* that made many valleys in Rome, originally mere marshes interspersed with pools of water, such as were the *Forum Magnum*, the *Velabrum*, and most of the great Campus Martius, into dry and habitable ground, and thus contributed very largely to the growth and prosperity of the city. The fact that these great drains carried away, not only the sewerage of the city, but also the water of a number of natural springs, was of great value in keeping them constantly flushed and clean. The largest of the sewers, supposed to be the *Cloaca Maxima* of Pliny, forms a conduit for a considerable body of water, issuing from the valley of the *Subura:* and numbers of fish, attracted by the offal in the drain, appear to have penetrated up it a long distance from the Tiber exit, and to have been caught and eaten by the poorer classes of Rome.[1]

An interesting description of the *cloacæ* is given by Pliny (*Hist. Nat.* xxxvi. 24), who, like Dionysius, attributes them to Tarquinius Priscus. He speaks of the largest one as being big enough for a loaded hay-cart to drive up—"*Amplitudinem cavis eam fecisse proditur ut vehem fœni large onustam transmitteret.*" And he records that M. Agrippa, the friend and minister of Augustus, during his ædileship inspected some of the *cloacæ* by penetrating a long way up them in a boat; a striking instance of his zeal as minister of public works.

The largest of the *cloacæ* has its exit in the great quay which lines the river bank by the *Forum Boarium.* At this

[1] The unhappy parasites mentioned by Juvenal in his fifth Satire were given these sewer-fish to eat —"*Solitus mediæ cryptam penetrare Suburæ,*" v. 106.

point its arch, which is about 11 feet wide and 12 feet high, is formed of three rings of peperino *voussoirs;* the wall of the quay is of tufa, and tufa is also used for the barrel vault of the *cloaca* everywhere except at the exit; this vault is in one ring only of *voussoirs* 2 feet 2 inches deep. The *Cloaca Maxima* starts in the valley of the Subura, at the foot of the *Carinæ*, the elevated spur of the Esquiline, on which now stand the churches of S. Pietro in Vincoli, and S. Francesco di Paolo. It then crosses the *Forum Magnum* at its lowest part (see Forum plate), passing under the south end of the *Basilica Julia*, where a break in the vault allows the *cloaca* to be seen. Thence it runs under the *vicus Tuscus* and the valley of the *Velabrum*, till it reaches the Tiber near the round temple in the *Forum Boarium*, supposed to have been dedicated to Hercules.

The masonry of this *cloaca*, and especially its peperino arch, is very neat and well jointed, resembling that of the arch in the Servian Wall on the Aventine. The exits of two other similar, but smaller *cloacæ* with stone barrel vaults, can also be seen in the great quay wall near the *Cloaca Maxima;* and a whole net-work of these primitive drains exists under various parts of the city. Some of these are built, not with arched vaults, but with triangular tops, formed of courses of stone on level bed, each projecting over the one below—a very archaic method of construction, employed in the *Tullianum*, and in Greece in the so-called "Tomb of Agamemnon," and other primitive buildings.[1]

There is much reason for believing that the notion of building these great arched *cloacæ* was derived, like most of the Roman architecture, from the partly Hellenised Etruscans.

[1] This method of construction, in which frequently the form of the arch without the arch principle is used, was much employed by Moslem builders in India during the Middle Ages to avoid the lateral thrust exerted by all true arches. This constant pressure on the haunches is expressed by the Oriental saying that "an arch never sleeps." In later times lateral thrust was avoided by the use of concrete for arches and vaults (see p. 32).

At the Etruscan city of Graviscæ, by the sea, near Tarquinii, there is an exactly similar stone *cloaca*, 14 feet wide, which also has its exit in a massive quay wall about 20 feet high, built both as a barrier against the water and also to form a landing-place for ships. Other Etruscan examples are known.

River Embankment.

Comparatively little now remains of the Roman quay wall which Plutarch (*Rom.* 20) calls the *κάλη ἄκτη*, of which the name *pulchrum littus* is a modern translation, not occurring in classical writings. In the last century, however, a magnificent piece of this noble wall still existed, about 100 yards long, and is shown by Piranesi in one of his etched plates. In later times this quay was extended on both sides of the river, apparently along the whole extent of the city; pieces of it still remain at various points along the *Campus Martius* and elsewhere, but are rapidly being destroyed by the widening of the river and the new embankment which is now being constructed. At intervals, all along its course, flights of steps led down to the river,[1] and rows of very magnificent houses were built along it. Several of these steps are shown on fragments of the marble plan (Jordan, *Forma urbis Romæ*, Nos. 51 and 169), which show the river and its stone embankment at a point beyond the Aventine, near the *Marmoratum*, or wharf where imported marbles were landed. On the opposite side of the Tiber the plan shows a small harbour and a porticus or covered colonnade.

At one place, not far from the mouth of the *Cloaca Maxima*, a piece of the original wall exists, with projecting lions' heads,

[1] In 1879 a travertine block was dredged up from the Tiber on which was an inscription of the first century B.C., recording the restoration of one of these river stairs—

P. BARRONIVS BARBA. AED. CVR.
GRADOS. REFECIT.

sculptured in the bold and effective Etruscan style.[1] These are pierced with holes for the ropes of moored ships. At the *Marmoratum* there are also a number of enormous travertine corbels, 8 feet long by 3 deep, each pierced with a hole one foot in diameter to receive the hawsers of ships fastened here while discharging their cargoes of marble blocks. They project from the long quay wall at regular intervals of about 50 feet. Five of these still exist, though most of the wall itself has disappeared. The wall of this great wharf was of hard tufa in massive blocks, some over 8 feet in length; in parts the wall is built of travertine, in others peperino is used, and there are later restorations in brick-faced concrete.[2]

The Mamertine Prison.

There can be no doubt as to this being the prison mentioned by Livy, i. 33 as the *carcer . . . . media urbe imminens foro*, and that alluded to by Juvenal, iii. 312, as being the only one which was required for Rome in the happy bygone period of the Kings—

> " . . . . . *felicia dicas*
> *Sæcula, quæ quondam sub regibus atque tribunis*
> *Viderunt uno contentam carcere Romam.*"[3]

It consists of two parts; the lower of these, a circular chamber called the *Tullianum*, is partly excavated in the rock and partly built of tufa blocks (see fig. 9), each course pro-

[1] These were first noticed by Mr. Parker; they are usually hidden by brushwood.

[2] An immense quantity of rough blocks of marble were found on this marble wharf some years ago, and on them were many interesting quarry marks, which are described in a very able article by Bruzza, *Ann. Inst.* 1870, p. 106 *seq.*

[3] Dion Cassius, lviii. 11, speaks of it as being near the Temple of Concord, and at lviii. 5 as being at the foot of the steps leading up to the Capitol.

jecting a little over the one below so as to form a cone. The

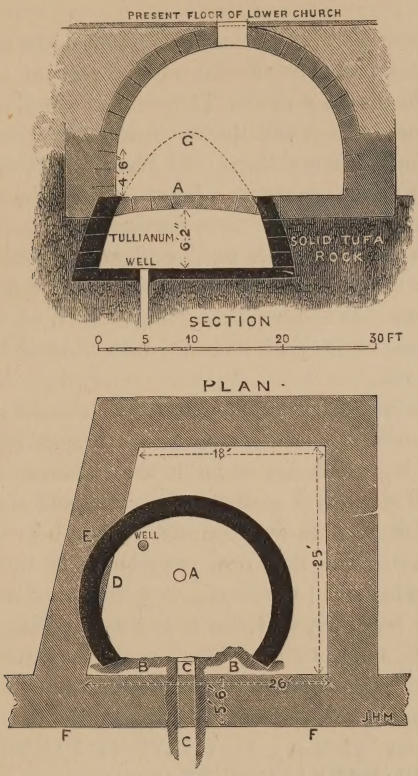

Fig. 9.

Plan and Section of the Mamertine Prison.

A. Opening in floor over the Tullianum ; the only access.
BB. Solid tufa rock.
CC. Branch of Cloaca.
DE. Position of modern stairs and door.
FF. Front wall of prison with inscription of 22 A.D.
G. Probable original top of Tullianum.

blocks are very neatly worked with close joints, and all are bedded on a thin skin of lime mortar, probably an earlier

instance of the use of mortar than even the Servian wall on the Aventine.

The upper part of the cone or domical covering of this chamber was probably cut off when the room over it was formed. In the floor of the Tullianum is a well containing a spring of clear water, and the whole chamber was apparently built originally as a cistern. Its name is derived from an archaic word *tullius*, meaning a jet of water. Varro (*Lin. Lat.* v. 151) wrongly derives it from Servius Tullius—"*Tullianum, ideo quod additum a Tullio rege*," evidently a double mistake, as the *lower* chamber could certainly not have been added after the *upper* one. It is described by Livy, xxxiv. 44, as *inferiorem carcerem;* and at xxix. 22, he mentions a criminal being put in the *Tullianum.*

That its original use as a cistern was abandoned is shown by the *cloaca* which leads from it to a branch of the *Cloaca Maxima*, along which any water in the *Tullianum* would have escaped. The present stairs are modern, and there was no access to this horrible dungeon except by a hole in the stone floor above it. This floor is of large blocks of tufa jointed so as to form a flat arch: the room over is larger and much loftier: it also is of very early date, but later than the *Tullianum.* It is built of tufa, and has a stone barrel vault, not semi-circular but segmental. A projecting string-course on the outside records a restoration in the reign of Tiberius by the *Consules Suffecti* for the year 22 A.D. C·VIBIVS·C·F·RVFINVS·M·COCCEIV[S·NERVA] COS·EX·S·C·

The two chambers of the prison are described thus by Sallust (*Cat.* 55): "*Est locus in carcere, quod Tullianum appellatur, ubi paullulum ascenderis ad lævam, circiter XII pedes humi depressus. Eum muniunt undique parietes, atque insuper camera lapideis fornicibus juncta; sed inculta tenebris, odore fœda, atque terribilis ejus facies est.*" The entrance to the upper prison was on the left hand side of the ascent from the Forum to the *Clivus Argentarius*, leading to the *Porta Ratumena;* this is apparently

what Sallust means by "*ubi paullulum ascenderis ad lævam.*" The lower chamber or *Tullianum* is called τὸ βάραθρον (the abyss) by Plutarch, *Marius*, 12. In it the unhappy Numidian king Jugurtha was flung, and there starved to death or strangled. It was the scene of countless butcheries and slow cruelty, such as the Romans delighted in. During a triumph, in his course up to the Capitol, each victorious general paused for a while near the Carcer, till word was brought him that some of his principal captives had been killed. It was here that Lentulus, Cethegus, and the Catiline conspirators were executed, and their death was announced by Cicero to the expectant crowd in the Forum by the single word *vixerunt*, "they have lived." The flight of steps, which led from the door of the upper prison down to the Forum, was called the *Scalæ Gemoniæ:* or, according to Pliny (*Hist. Nat.* viii. 61), *Gradus Gemitorii*, "the stairs of sighs." See Tac. *Hist.* iii. 74 and 85. On it the body of Sabinus, and a few days afterwards that of the murdered Vitellius, were thrown (Suet. *Vit.* 17); and in the reign of Tiberius the bodies of Ælius Sejanus, his family and friends, after they were cruelly murdered by the Emperor's orders, were exposed on these *Scalæ*, to the number of twenty in one day; see Suet. *Tib.* 61.[1]

It appears to have been the custom to expose on the *Scalæ Gemoniæ* the bodies of all who were killed in the adjoining prison. The endurance by the Romans of such hideous sights and their savage want of respect for the dead are strong examples of that innate coarseness which underlay their thin varnish of Hellenic refinement. The rare occasions when the Romans showed any mercy to a fallen enemy appear to have resulted from their vanity rather than from any germ of chivalrous feelings.

According to Varro (*Lin. Lat.* v. 151) the district immedi-

[1] These stairs, of which probably some remains exist, are buried under the modern road, and will probably be discovered when the excavations are continued in that direction.

ately round the prison was called the *Latomiæ* or *Lautumiæ*, stone quarries (λᾶος-τομή); he suggests that the name was taken from the Syracusan quarries, which were used as prisons;[1] but it appears probable that the tufa rock of the hill here was once quarried for building material, and that may have been the origin of the primitive cistern or *Tullianum*, it being a very frequent custom to use the cavities formed by quarrying rock as water reservoirs (see p. 90).

Other remains of the Regal period exist in Rome, especially in the foundations of some of the temples,[2] but none of these are of much importance. The numerous fires and the wholesale rebuilding of temples and other public buildings under the Empire, on a grander scale and of richer materials, caused the destruction of nearly all the primitive structures of Rome, both sacred and secular. To these causes must be added the fact that soft varieties of tufa were largely used; a friable stone, which lasted well as long as it was covered with a coating of stucco and sheltered by a roof, but which perishes rapidly when deprived of these methods of protection.

[1] Thucydides (vii. 86–87) gives a terrible account of the sufferings and death of nearly seven thousand Athenian prisoners, taken after the unsuccessful siege of Syracuse during the Peloponnesian War, and imprisoned in the extensive quarries of *Neapolis*, the main suburb of Syracuse. See also Cicero, *In Verrem*, Act. vi. lib. v. 55.

[2] For an example in the *Temple of Vesta*, and part of the *Regia*, see pages 184 and 186.

Fig. 10. Plan of

Palatine Hill.

To face page 83.

Fig. 10.

PLAN OF THE PALATINE HILL.

REFERENCES TO NUMBERS.

1. Present entrance.
2, 2. Remains of wall of Roma Quadrata.
3. Aqueduct.
4. Early buildings of opus reticulatum.
5. Scalæ Caci.
6. Buildings of mixed brick and opus reticulatum.
7. Altar to the unknown God: Sei Deo, sei Deivæ, etc.
8. Reservoir cut in the tufa rock.
9. Passage cut in the rock.
10. So-called Temple of Cybele.
11. Very early structures of tufa.
12. Tufa arcade and paved road.
13. Building with travertine piers of the later Republican period.
14. So-called Temple of Jupiter Victor.
15. Well communicating with subterranean rock-cut reservoirs.
16, 16. Small chambers and paved road, part of Tiberius's building.
17. Piscina.
18. House of Germanicus.
19, 19. Crypto-porticus.
20, 20. Early building of tufa buried and covered by Domitian's building.
21. So-called academy and library, part of Domitian's Palace.
22. Triclinium of Domitian's Palace.
23. Nymphæum and piscina.
24. Peristyle.
25. Small rooms at side of peristyle.
26. Stairs down to the crypto-porticus.
27. Throne-room.
28. Lararium.
29. Basilica.
30. Branch of crypto-porticus leading to Domitian's Palace.
31. Crypto-porticus of Caligula.
32, 32. Stairs from crypto-porticus to higher level.

33, 33. Early buildings of opus reticulatum.
34, 34. Stairs from Forum to Porta Romanula.
35 and 38. Stairs to upper rooms of Caligula's Palace.
36, 36. Substructures of Caligula's Palace.
37. Caligula's bridge.
39. Porta Mugionis.
40. Temple of Jupiter Stator (so-called).
41. Remains of wall of Roma Quadrata.
42, 42. Remains of Nero's Palace.
43. Great concrete platform.
44. Remains of the mediæval Turris Cartularia.
45, 45. Series of small bath-rooms.
46. So-called basilica of the fifth century.
47. Site of the Temple and libraries of Apollo.
48. Palace of Augustus (now destroyed).
49. Domus Gelotiana.
50. Stadium, with oval hall of Theodoric?
51. Exedra of Hadrian.
52. Stairs from Stadium to higher level of hill.
53, 53. Remains of Hadrian's Palace, partly covered by the later Palace of Severus.
54. Baths of Severus's Palace.
55, 55. Lofty substructures of Severus's Palace.
56. Aqua Claudia brought on Nero's Aqueduct.
57. Shops of opus incertum.
58. Substructures of the Circus Maximus.
59. Remains of early tufa building and brick-faced structures of Imperial times.
60, 60. Paved road skirting the outside of the Circus Maximus.

CHAPTER III.

THE PALATINE HILL.

WITHIN the walls of *Roma Quadrata*, described in the last chapter, there are a number of very early buildings, some probably dating from prehistoric times; these are mostly grouped in the western angle of the Palatine, by the north-west side of the *Scalæ Caci* (see fig. 10). Some of these very interesting remains are built of the softest tufa; and of these, in a few years, nothing will remain. Since they were uncovered and exposed to the weather they have been rapidly crumbling into mere heaps of earth; although, when found, the edges of the blocks were perfectly sharp and well preserved.[1]

Various names, such as the *hut of Faustulus*, and the *Auguratorium*, have been given to some of these early structures, but only as a matter of guess-work; any real identification of their names or uses is impossible, and only a vague notion of their dates can be arrived at. That they are of considerable antiquity is certain, not only from their simple form and the primitive character of much of their masonry, but also from the fact that some of the walls are built on a stratum which contains fragments of pottery, clearly of early date—probably not later than

[1] It appears strange that these primitive buildings, which must have stood exposure to air and rain for a thousand years, should fall into such rapid decay on being again uncovered, but it must be remembered that originally these walls were protected with roofs, and (more important still) were probably completely covered with a thick coat of hard stucco, affording an effective protection against wet and frost.

the fifth century B.C. ; other fragments have the very fine black enamel which was made in Magna Græcia during the fifth to the third centuries B.C.

Whatever these buildings were, it is clear that they were respected and preserved even under the later Empire, when almost the whole summit of the Palatine had become one immense continuous range of palaces and marble temples.[1] These modest tufa structures were probably regarded as sacred relics of the early history of Rome, and were valued both for religious and archæological reasons.

Opposite the summit of the *Stairs of Cacus* is a simple *cella*, built without mortar, of large blocks of soft tufa, some of which have deeply-incised masons' marks, similar in character, though not in actual form, to those on the Servian wall (see p. 72).

This is probably the most primitive form of Roman temple : earlier even than the building with wooden architrave and widely spaced columns, which the Romans adopted from the more artistic Etruscans. Near this, on the right hand of the *Scalæ Caci* (looking down on it), are remains of other buildings in hard tufa, which appear to have been erected over still earlier ones of soft tufa, set at a different angle. A curiously arranged flight of steps in hard tufa descends here from the higher level, and turns round at right angles, leading down to an open tufa gutter for rain water, which skirts the two existing sides of a chamber of fine well-jointed tufa masonry, probably early Republican in date. These steps appear to have led up to a large paved area, part of which, with a well-jointed pavement of tufa blocks, still exists. This stone platform may possibly be the *Auguratorium* (see p. 235).

A little lower down the slope, and set partly on and against the primitive soft tufa wall which once flanked the *Scalæ Caci*, is a very curious little structure of well-wrought blocks of hard

[1] Hence *Palatium*, the Latin name for the *Palatine Hill*, came to mean any *palace*.

tufa, once covered with an arched stone vault. This little chamber, barely 8 feet wide inside, appears to have been a fountain or cistern (fig. 11). In the end wall, which is well preserved, is a large central hole for the water-jet, and a groove is cut for the pipe to supply it. This also is apparently of

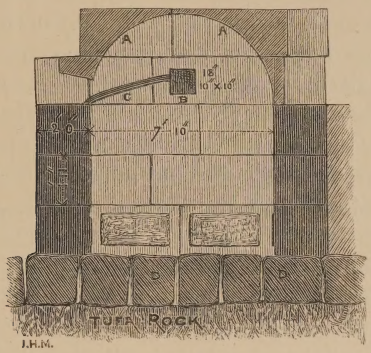

Fig. 11.

Remains of an early Cistern by the Scalæ Caci.

A A. Line of stone barrel vault.
B. Hole for water jet.
C. Sinking for water pipe.
D. Blocks of soft tufa belonging to some older structure.

early Republican date; and it stands on a single course of much older masonry, resembling that of the "*Wall of Romulus.*"

At this point a branch basalt-paved road runs into the *Scalæ Caci* at right angles; it was drained with a curious square drain cut out of blocks of tufa, with a tufa slab as a lid, closely fitted on to it. Facing on to this cross road are remains of an arcade of Republican date, with a series of semi-circular peperino arches in a concrete wall faced with early *opus reticulatum.* Between this arcade and the line of the circuit-wall, overlooking the west angle of the cliff, are extensive remains of a house, with many handsome marble baths, part of which is built of *opus reticulatum,* probably of the time of Augustus; but the greater

part, with all its complicated heating arrangements—hypocausts and walls lined with square flue-tiles—are of concrete faced with brick-work, not earlier than the beginning of the second century A.D., while a considerable part is of the third century. Some of the lead water-pipes are still *in situ*, embedded in the late brick and concrete walls.

Returning to the higher level at the top of the *Scalæ Caci*, there are other remains of early buildings, and especially a number of fragments of a temple built of peperino, covered with fine hard white stucco of pounded marble. These fragments, which are very valuable specimens of early Roman architecture, include drums of fluted columns about 3′ 6″ in diameter, Corinthian capitals, and many pieces of the cornice,[1] including the apex stone of the Pediment. The design of this cornice is a very primitive Romanised form of the Greek Corinthian, the consoles being plain without leaves or volutes, and the members unenriched with surface ornament. The stucco is very thickly applied, completely smothering the carving and details which were cut in the peperino, so that the whole had to be modelled afresh, almost as if the stucco had been applied to a rough shapeless stone. This stucco is a beautiful hard composition of lime and pounded white marble, the *opus albarium* of Vitruvius, capable of taking a polish like real marble, and nearly as durable.

Other massive fragments lie near here of a large architrave worked in travertine, and also coated with stucco, belonging to some building of rather later date. A well-shaft close by, lined with peperino, communicates with a very extensive series of subterranean rock-cut chambers, originally formed by quarrying the tufa for building purposes, and afterwards used

[1] On the top of this cornice is a channel 11 inches wide to catch the rain ; it is lined with opus signinum, a very hard waterproof cement made of broken earthenware, the same as was used for channels of aqueducts ; this channel acted as an eaves' gutter, and the water from it was discharged through pierced lions' heads set at intervals in the *cymatium*.

to store rain or spring water; in later times these rock-cut cisterns were supplied by an aqueduct, remains of which exist against the cliff opposite the so-called *Temple of Jupiter Victor*. A piece of the *specus* of this aqueduct can be traced passing on the top of the ground, in a slanting direction, toward the subterranean cisterns under the "*Temple of Jupiter*."

This temple, the real dedication of which is doubtful, stands on a lofty platform of tufa rock, artificially levelled: it occupies a very commanding position, overlooking the *Vallis Murcia* and the *Circus Maximus*. Little, besides the concrete core of the *Podium*, still remains; but at one point on the south, part exists of the massive stone wall which once enclosed the whole of the concrete foundation: a method of construction similar to that of the Temple of Castor (see p. 175).

This wall is of mixed tufa and peperino, set with very thin beds of lime-mortar; the blocks are the usual two Roman feet in thickness, and the whole wall appears once to have been 15 feet thick.[1] Small chambers are formed in the concrete mass of the foundations, as appears to have been always the case with Roman temples if raised on a high *podium*. A whole network of passages and chambers are excavated in the tufa rock on which this temple is built: access to these is given by a flight of steps on the south-east side, leading down from the floor of a long *Crypto-porticus*, one end of which starts from a distant point in the so-called "House of Livia," while the other end of this long subterranean passage issues near the "temple of Jupiter Victor" into remains of an early Republican house, built of tufa, at a level much below that of the rock on which the temple stands.[2] The full extent of these sub-

[1] The whole empty space, now bridged over in wood, between the *podium* itself and the foundations of its great flight of steps in front, was once filled by one of these massive tufa walls, all the stones of which have been removed for building material.

[2] In its original state the top of this half of the Palatine was very far from being the level surface to which it was gradually reduced under the

terranean quarry-chambers is not known, but they certainly extend a long way beyond the temple, and formed very extensive cisterns for storing water. In places they consist of narrow winding passages, which occasionally expand into more spacious chambers. A few architectural fragments, which belong to this temple, were found near it, and have been set on the top of the *podium;* these are a number of tufa drums of fluted columns, about 3 feet 3 inches in diameter, once thickly coated with stucco, and decorated with painting.

A very interesting inscription is now set on the steps of the temple, though it was found at some distance from it. This is cut on the lower part of a white marble column, 3 feet 1 inch in diameter, the upper part of which has been sawn off, and a fluted basin formed in its top surface. It was erected out of spoils won by Cn. Domitius, one of J. Cæsar's generals, who commanded the centre of Cæsar's army at Pharsalia: he was Consul in 53, and in 40 B.C.

The inscription is :—

CN. DOMITIVS. M. F. CALVINVS.
PONTIFEX. (*i.e.* Pontifex Maximus.)
COS. ITER. IMPER.
DE. MANIBIEIS. (Archaic EI, for long I.)[1]

At the back of this temple are some fine marble fragments of some very handsome Corinthian building, with large fluted

emperors. More than one valley, or natural depression, has been filled up, and in many places rocky peaks have evidently been cut away. Under Domitian especially, the most gigantic substructures were built, in order to form an enormous platform, on which his great series of state rooms was erected.

[1] This temple, as well as many others on the Palatine and in the Forum, have suffered much injury from the fanciful restorations of Comm. Rosa, who conjecturally gave it the name of *Jupiter Victor*, on the strength of the following entry in the *Notitia*, under *Regio* X. "*Area Palatina et ædem Jovis Victoris*"; other entries in this list—*casa Romuli, Auguratorium*, and *tugurium Faustuli*, suggested the names which have been arbitrarily given to the very early remains by the *Scalæ Caci*.

columns and entablature. A very curious mason's mark occurs on one of the marble drums: it resembles the common monogram of Christ's name.

On the north-east side of the temple are remains of a curiously planned building, a sort of *Porticus*, of late Republican date, with tufa walls, and rows of travertine columns; its name and use are quite unknown.

In the area of this building is another well-shaft, lined with *Opus reticulatum*, which, like the other well, communicated with the subterranean rock-cut cisterns mentioned above. (See fig. 10, No. 13.)

The so-called Temple of Cybele.—Farther to the north-east, between the primitive tufa structures and the edge of the cliff overlooking the *Velabrum*, are enormously thick concrete walls of a large cella, completely stripped of all its architectural decorations. The concrete is formed of alternate layers of soft tufa and hard peperino, and in parts is faced with *Opus incertum*. It appears to be a work of late Republican or early Imperial times, and was once faced with blocks of stone or marble. By it is a fine colossal female figure in Greek marble, of the first century A.D., which is supposed to be a statue of Cybele, and hence this temple is conjecturally called after her.[1] It is a noble figure seated in a throne, wearing the *stola* bound by a girdle, and over it the *pallium;* the hair falls in front over the shoulders. The arms and head, which were worked in separate blocks of marble are missing, but the rest of the statue is very well preserved. The very interesting remains of an extensive house of Republican date, near this point, are only partly visible, as the house was buried under the great artificial platform on which

[1] An *ædes Matris deum* occurs in the list of the *Notitia* for the Palatine, Regio X.; and in the *Mon. Ancyr.* Augustus records AEDEM · MATRIS · MAGNAE · IN · PALATIO · FECI; but this building more probably formed part of the great group of temples built by Augustus in the Area of Apollo. See p. 105.

Domitian built his palace. Some rooms of this house are now accessible below the later level of the hill, at the end of the *Crypto-porticus*, which leads to the "House of Livia," just below the *loggia* of the sixteenth century *Casino*, which is still left standing among the ruins. Other rooms can be seen deep below the so-called *Bibliotheca* of Domitian; showing how deep a valley was filled in and covered by the Flavian Palace. It is difficult to realise that the floor of these lofty rooms, about 30 feet below that of the Flavian buildings, was once the top of the Palatine at this point. The walls are built of hard tufa blocks, very neatly jointed, with simple arched doorways—a very valuable example of the domestic architecture of Republican Rome, but not yet fully exposed.

The rooms under the "*Bibliotheca*" are not accessible, but those at the end of the *Crypto-porticus* can be easily examined. These appear to have continued in use during late Imperial times, and show several late alterations and additions, namely brick-faced concrete walls, and a coarse mosaic floor decorated with large fishes, probably not earlier than the time of Caracalla. The other rooms appear to have been buried and abandoned, like the house under the great *Peristyle* of Domitian.

The *Temple of Jupiter Stator* was traditionally one of the earliest buildings of Rome,[1] being built by Romulus in fulfilment of a vow made during the repulse of the Romans by the Sabine inhabitants of the Capitoline Hill: Liv. i. 12.

During this battle the Romans were driven back within the walls of *Roma Quadrata*, retreating through the *Porta Mugonia*, and it is on that spot, close by the gate, that the temple of *Jupiter Stator* was built; Ῥωμύλος μὲν ἵδρυσατο ἱερὸν Ὀρθωσίῳ Διὶ παρὰ ταῖς καλουμέναις Μυκωνίσι πύλαις, αἵ φέρουσιν εἰς τὸ παλατίον ἔκ τῆς ἱερᾶς ὁδοῦ; Dionys. ii. 50: its position is also described by Ovid (*Fast.* vi. 793) as being "ante Palatini. . . . ora jugi."

[1] The temple of *Jupiter Feretrius*, on the *Capitolium*, is the only other temple which is recorded as being earlier than this.

This temple was also close by the house of Tarquinius Priscus, Livy (i. 41); and Solinus (*Polyhistor*, i. 24) mentions that Tarquin lived by the *Porta Mugonia*,[1] the site of which, on the road leading from the *Summa Sacra Via* (by the arch of Titus) up to the Palatine, has been with much probability identified.

Just within the supposed site of the *Porta Mugonia* are extensive remains of a concrete *podium*, the surrounding masonry of which has been wholly removed (see 40, on fig. 10). The position and size of these remains make it appear probable that it is part of the *Temple of Jupiter Stator;* but if so, the whole temple down to its lowest foundations, must have been rebuilt under the Empire, as the concrete is made not of tufa or peperino only, as was the case with the concrete of early times, but contains, even in its lowest layers, travertine, brick, and even marble; the latter a sure sign of work later than the end of the Republic. At one side of this ruined *podium* an excavation has been made, which shows the mouth of a large brick drain; and leading down to it from the surface of the ground, close by the temple, are remains of a shaft or vertical drain built of blocks of tufa, on two of which are inscribed the names of two Greeks, possibly stonemasons, *Diocles* and *Philocrates*, in characters of about the third century B.C.

These inscribed blocks have been wrongly supposed to be part of the foundations of the temple, but their size, shapes, and position show that they belong to a separate structure, and were simply part of a down-shaft, possibly to carry surface rain water into the sewer below.

According to Vitruvius (III. ii.) this temple was *Hexastyle*, *peripteral*, with eleven columns on the sides; it was burnt during the great fire of Nero's reign. On several occasions it was used as a meeting-place for the Senate, selected for its strength

[1] "*Tarquinius Priscus* (*habitavit*) *ad Mugoniam Portam, supra Summam Novam Viam.*" The Summa Nova and the Summa Sacra Via meet a little way outside the *Porta Mugonia* (see fig. 10).

and the safety of its position; Cicero's first Oration against Catiline was delivered before the Senate in this building: see Cic. *In Cat.* I. i.; and Plutarch, *Cic.* 16, who says—Ὁ Κικέρων ἐκάλει τὴν συγκλητὸν (the Senate) εἰς τὸ τοῦ Στησίου Διὸς ἱερὸν, ὃν Στάτωρα Ῥωμαῖοι καλοῦσιν, ἱδρυμένον ἐν ἀρχῇ τῆς ἱερᾶς ὁδοῦ πρὸς τὸ Παλατίον ἀνιόντων. The road (*Clivus Palatinus*) mentioned here as going up to the Palatine starts from a point where the *Summa Nova Via* runs into the *Summa Sacra Via:* this junction of the three roads was exposed to view in 1884; some of the basalt paving is formed of exceptionally massive blocks, and is earlier in date than most of the roads in the Forum.

In the first century B.C. that part of the Palatine Hill which faces towards the *Sacra Via*, the *Forum Magnum*, and the Capitoline Hill, appears to have been the favourite quarter for the houses of rich and influential Roman citizens. Here was the house of the orator Lucius Crassus, valued at six million sesterces (£62,000), which had in its Atrium six columns of Hymettian marble, which were thought an extravagance, unsuited to the modesty of a Roman citizen (Pliny, *Hist. Nat.* xxxvi. 24), and gained him the nickname of the Palatine Venus, given him by M. Brutus, Cæsar's murderer (see Pliny, *Hist. Nat.* xxxvi. 3); this house apparently became the property of Scaurus, a man of enormous wealth, who built the temporary theatre, which the stern Pliny (*Hist. Nat.* xxxvi. 24) also highly reprobates for its luxurious splendour (see p. 292). This house, enlarged and made more magnificent by Scaurus, was bought by Clodius for nearly fifteen million sesterces, about £130,000. See Ascon. ad Cic. *Pro Scauro.*

Cicero's house was on the lower slopes of the Palatine towards the *Regia;*[1] it was built by M. Livius Drusus, and then passed to a namesake and relative of the orator Crassus, from whom it was bought by Cicero; see Cic. *Pro Domo*, 37,

[1] Cicero called himself "Cæsar's neighbour": *Ad Fam.* v. 6, and *Ad Att.* xii. 45.

and *De Har. resp.* 8, 33. That it was immediately below the house of Clodius is shown by Cicero's threat to add new stories to his house in order to block out from Clodius the sight of the city he had sought to destroy (*De Harus.* 15). The house Cicero refers to was one previously possessed by Clodius, not the house which had belonged to Scaurus, as Clodius only bought the latter very shortly before his death.

A large house in this northern angle of the Palatine was possessed by Q. Lutatius Catulus; its Porticus was built out of the spoils won by him and Marius from the Cimbri in 102 B.C. (Cic. *Pro Domo*, 43, and Val. Max. vi. 3, 1.) Catiline, and Q. Hortensius, Cicero's rival, also had houses in this quarter; as well as several other wealthy Romans.

The commanding view, and the vicinity of this site to the *Forum Magnum*, no doubt were among the chief reasons for its popularity, and hence the feelings of indignation aroused when Caligula absorbed nearly the whole of the ground occupied by these, the finest among the private houses of Rome, in order to build his gigantic palace, which has obliterated all traces of these memorable buildings. Farther to the west, above the *Velebrum*, there are still existing remains of buildings in *opus reticulatum*, apparently of the first century B.C. These are probably parts of a long series of private houses, built against the cliff along the line of the primitive circuit wall of *Roma Quadrata*. They are partly concealed by brick-faced walls of the early Imperial period; but remains of a fine building, in the neatest sort of *opus reticulatum*, can be seen just opposite the Church of S. Teodoro, high up, through an arched opening in the later concrete and brick wall.

Passing to the south-west of the Palatine, the side towards the *Circus Maximus*, there are, on the outside of *Roma Quadrata*, very extensive remains of buildings, in a long line from the west angle of the hill towards and beyond the *Scalæ Caci*.[1]

[1] The present entrance to the Palatine brings the visitor opposite this line of buildings, immediately on passing through the turnstile.

These have been supposed to be part of the *Domus Tiberiana*, or Palace of Tiberius, see Suet. *Tib.* 5; Tac. *Hist.* i. 27, and iii. 71; the beautiful *Opus reticulatum*, with which the older concrete walls of these buildings are faced, may from its style be attributed to a period not later than the first part of Tiberius's reign.[1]

This long line of buildings is set (like the "Wall of Romulus"), on a sort of shelf cut in the tufa rock; and they are built against the cliff, partly in place of and partly covering the primitive wall, in such a way that the third or fourth story is level with the top of the hill; stories higher still rose above the summit of the Palatine, so that these buildings were entered at two different levels, one from the lower platform about half-way down the slope, and the other from the top of the cliff.

What the precise use of these long rows of vaulted chambers may have been is difficult to guess, but they were probably for slaves or soldiers on guard. The rooms are mostly small, and some are mere cells; the larger and handsomer rooms were probably in the higher stories which no longer exist.

These small vaulted chambers are all remarkable for the beauty of their construction; only tufa is used both for the concrete and also for the facing, except that some of the semi-circular vaults are made of concrete, formed of pumice-stone mixed with the lime and *pozzolana*, instead of tufa, for the sake of its superior lightness. Those parts where brick facing occurs are all later additions. At many points remains of stairs exist, leading from the lower level to the summit of the hill. These buildings, except at one point, are not yet excavated to their lowest story, and it is evident that they were once much more extensive. They were in fact great

[1] Some parts, especially that at the extreme west angle, are faced with the mixed *Opus reticulatum* and brick; exactly resembling that of the lower part of Caligula's Palace, described at p. 112.

substructions by which the level top of the Palatine was once extended over series of vaulted chambers, piled one above the other, in the direction of the great Circus below, in the same way as the palace of Caligula extends over the slopes of the Palatine towards the Forum.

At one place, near the top of the present winding path, opposite the *Temple of Jupiter Victor* (so-called), there are remains of a large *hypocaust*, the under floor of which, covered with the stumps of the square *pilæ* on which the upper concrete floor rested, still exists at a level flush with the top of the hill; this *hypocaust* once extended far beyond the edge of the cliff, over the top of some of these many-storied substructures.

Traces of painted stucco remain on the walls of these interesting early buildings, and some mosaic floors, with simple patterns of small neatly fitted *tesseræ* in white marble and brown lava.

In front of this line of buildings, close by the modern turnstile, a very interesting altar, inscribed to an unknown god or goddess, was discovered in 1820, and is still *in situ;* the form of this altar is a very primitive one, and this example though not earlier than about 100 B.C., is certainly a copy of a much older altar, such as that in the Cortile of the Palazzo dei Conservatori on the Capitol, which is cut in tufa.

This one is of coarse travertine, once covered with fine white stucco; on it is inscribed in archaistic form—

SEI · DEO · SEI · DEIVAE · SAC(rum)
C · SEXTIVS · C · F · CALVINVS · PR(ætor)
DE · SENATI · SENTENTIA · RESTITVIT.[1]

Mommsen (Cor. In. Lat. i. 632), attributes the restoration of this altar to the younger C. S. Calvinus, the son of the Consul of that name, who is mentioned by Cicero as being a candidate

[1] The ei for ī, in *sei* and *deivæ*, and the genitive *senati*, are early forms.

for the Prætorship against C. Servilius Glaucia in 100 B.C. See Cic. *De Orat.*, ii. 61, 249.

The vague dedication of this altar recalls that one which was consecrated to *Aius loquens*[1] (the speaking voice) in the *Lucus Vestæ*, "*in infima nova Via*," Varro, ap. Aul. Gel. xvi. 17,

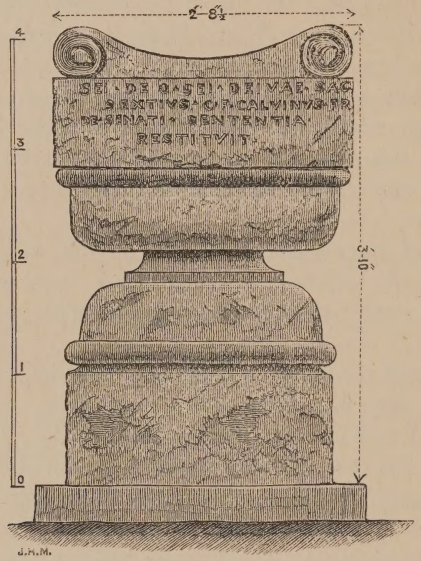

Fig. 12.

Altar to the Unknown God.

in commemoration of a ghostly voice heard in the night as a warning of the approach of the Gauls. This latter altar must have been moved when Caligula built his great palace over the sacred grove of Vesta; and Mommsen suggests that the existing one is that which once stood in the *Lucus Vestæ*. The absence, however, of any mention of *Aius loquens* on

[1] The Romans appear to have been fond of a senseless reduplication of names for a deity; besides *Aius loquens* or *locutius*, they had a *Fors Fortuna*, and other similar phrases.

the inscription, makes this seem improbable, and this is not the only instance of a Roman dedication to an unknown deity.[1]

"HOUSE OF LIVIA."

The so-called "*House of Livia*" is a very well-preserved and complete specimen of a Roman house of the time of Augustus. Like the "*Domus Tiberiana*," it is constructed of tufa concrete, with very neat *opus reticulatum* facing, and quoins and arches of small rectangular tufa blocks (see fig. 13).

Like other buildings on this part of the Palatine, it shows that once the level was much more uneven and broken into hollows and ridges than it was under the later Empire. The lower story of the house, with its more public rooms, is set in a sort of hole against the side of a low rocky ridge, in such a way that the upper story behind is level with the road which runs along the higher ridge. A flight of travertine stairs, with vaulted roof, leads down to the open *Atrium* at the lower level, and into this, on two sides, various public rooms open; the bedrooms and women's apartments are all behind, at the higher level of the hill. The paintings on the walls of the rooms opening on to the *Atrium* are fine and well-preserved examples of Roman wall-painting, earlier in date than most at Pompeii, and equal in execution to the very best of them. See *Mon. Inst. Arch. Rom.* xi.; Tav. 22–3; and Renier, *Les peintures du Palatin*, Paris, 1870. In the centre, opposite the entrance, is the *Tablinum*, a sort of parlour; in the middle of the wall on the left is a fine painting of Io watched by Argus, while Hermes approaches stealthily round a large rock, preparing to kill Argus, and so liberate Io. This picture is well composed, and painted with much delicacy; it appears to be the work of a Greek artist, as the names of the figures repre-

[1] Cf. the invocation on an inscription of the *Fratres Arvales*, "*Sive deo sive deae in cujus tulela hic lucus locusque est.*" Marini, *Atti dei frat. Arval.* Pl. xxxii., and p. 370.

sented were painted under each in Greek letters. ЄPMHC is the only one now legible, as this and all the paintings in

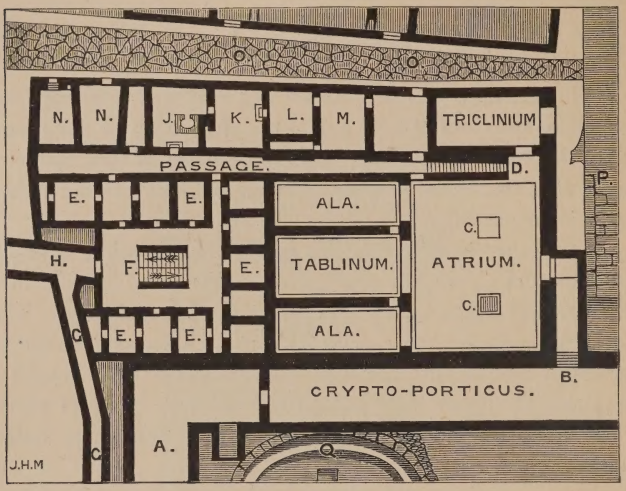

Fig. 13.

Plan of the so-called "House of Livia."

A. Crypto-porticus leading to Caligula's Palace.
B. Stairs down to the Atrium.
C C. Pedestals for statues in the Atrium.
D. Narrow stairs from the Atrium to the upper floor.
E E. Bedrooms.
F. Stairs to highest story, now destroyed.
G. Narrow Crypto-porticus, not fully excavated.
H. Crypto-porticus leading to the Flavian Palace, and branching off to the cisterns under the so-called "Temple of Jupiter Victor."
J K L M. Series of bath-rooms.
N N. Shops opening into the public street, O O.
P. Remains of an early tufa building.
Q. Piscina.

this house have suffered much in the fifteen years since they were exposed to light.

On the same wall is a curious street scene, with fanciful

architecture; lofty houses, from the windows and porticoes of which figures are looking out; near this, and on the end wall also, are small gracefully designed paintings, which represent easel pictures hung on the walls, and are of special interest, as showing the form of the movable pictures of the Romans. They are represented as panel-paintings, each with folding doors, like a mediæval *triptych;* the doors are shown open, in perspective. The subjects of these sham easel pictures appear to be sacrificial or domestic scenes; they have gracefully draped female figures, partly Hellenic in style, and recalling the style of figures on certain late Greek vases.

On the end wall is a large painting, now much damaged, of the Cyclops Polyphemus, with Cupid on his shoulder watching the nymph Galatea, who is riding on a sea monster among the waves.

The lower part of the walls has a plain dado; and in the upper part, between the pictures, are series of slender columns, entablatures, and other sham architectural details, painted in violent perspective, and in imitation of relief with stong shadows—examples of that decline in taste which Vitruvius so strongly reprobates in his great work on architecture (vii. 5), written, probably, but little before the execution of these paintings.

Against the walls of the *Tablinum* are fixed some lead water-pipes, which were found in this house, though later in date than the building itself. On them inscriptions are cast in relief, repeated apparently on each plate of lead out of which the pipes are formed. Lead pipes were not cast into tubular form by the Romans, but were made of cast plates, rolled round, and joined with a longitudinal lap or seam, which was beaten together and then soldered. The pipes were joined endways, in lengths of about 10 feet, by an enlarged socket being formed in one end by beating it over a wooden conical core, while the other was contracted by hammering so as to slip into the enlarged part, and then the two ends were

soldered together. The plates out of which these pipes are rolled were about 16 inches wide, 10 feet long, and $\frac{1}{4}$ to $\frac{1}{3}$ inch thick. Their inscriptions are (1) IVLIAE · AVG · — probably the Julia who was the daughter of Titus; (2) F · PESCENNIVS · EROS · CAESARVM—an imperial freedman; and (3) IMP·DOMITIANI·CAESAR·AVG·SVB·CVRA·EVTYCHI. L · PROC · FEC · HYMNVS · CAESAR · N̄ · SER ·, that is: "*In the reign of the emperor Domitianus Cæsar Augustus: under the care of the procurator, the freedman Eutychius: Hymnus, a slave of our Cæsar, made it.*"

On each side of the *Tablinum* is a side-room (*ala*); that on the left has sham architectural paintings of columns and entablature on a plinth or dado. At the end are graceful winged female figures and hanging foliage, designed with great spirit, and very delicately executed. The right *ala* has similar columns, from which hang large wreaths of fruit and foliage, richly designed, and painted with much effective realism. There is also a curious intermediate frieze, painted in a monochromatic way, with various shades of yellow; it is divided into long panels, representing fanciful landscape scenes, with rivers, bridges, temples, men, and animals, among which are some camels; it is all very minute in scale, and has very little decorative effect. The *Triclinium*, also, has a series of columns on a plinth; the panels are mostly vermilion, and above is a frieze of rudely painted sham marble; and above that, small panels containing glass vessels full of fruit. The fruit seen through the transparent glass is cleverly rendered. Below are large panels of rudely painted trees, birds, and animals, evidently the work of a very inferior artist to the Greek who painted the pictures in the *Tablinum*. In technique these paintings resemble those found at Pompeii, and appear to be executed by more than one process (see p. 416). The plain-coloured grounds, over which the pictures are painted, were probably done by the *encaustic* process, that is, the pigments were applied with a hot wax medium; fresh wax was

then rubbed over the surface, and melted into the stucco by the application of a brazier of charcoal, and the whole surface then brought to a high mechanical polish by rubbing with silk. Over this polished surface the pictures were then painted, and fixed by a further application of wax and the hot brazier; the process is described by Vitruvius (vii. 4 to 6).

In those walls of the *Triclinium* which are on the outside of the house, and therefore exposed to damp, special precautions have been taken to protect the paintings from wet soaking through; the whole walls are lined on the inside by flange-tiles, so fixed as to leave an air-cavity between the wall and the thick coating of stucco, which is afterwards laid over the tiles (see Vitruv. vii. 4).

The floors of these rooms have simple mosaic patterns of hexagons and triangles in gray lava and white marble, with small *tesseræ* like those of the *Regia* (see p. 188).

The *Triclinium* is paved with white mosaic, studded with irregularly-shaped bits of coloured Oriental marbles and alabaster, then much rarer in Rome than they afterwards became; they appear very brilliant from contrast with the white ground.

Next to the *Triclinium* is a dark room, vaulted in tufa concrete, as are the rooms above mentioned; this is possibly a kitchen, and by it a narrow stair ascends to the upper story, which could also be entered from the road at the higher level. The numerous upper rooms are very small, some are barely 6 feet square; remains of a staircase exists, which once led to a higher story still, now destroyed. At this part of the house there are foundation walls of some later building, cast in rough concrete, and easily distinguishable from the neat *opus reticulatum* of the original structure. A door opposite this staircase leads into the long *crypto-porticus*, which branched in three directions; one branch leads into the ancient Republican house described above, and from it stairs descend to the rock-cut chambers

under the temple (so called) of Jupiter Victor; another branch turns off at a sharp angle to the left, and a third continues in a straight line towards the *Flavian Palace;* the two latter are not yet cleared out. In addition to the private rooms on this floor, the part of this house which faces on to the road contains a row of small shops which open on to the road, but have no doors leading into the house itself.

Another *crypto-porticus* starts from near the top of the stairs leading down to the Atrium, and communicates with the long *crypto-porticus* (17 on fig. 10), which runs into the Palace of Caligula, and afterwards was connected with the Flavian Palace. In the part of this passage, which connects this so-called "*House of Livia*" with Caligula's *crypto-porticus*, the vault is decorated with very beautiful and spirited reliefs, modelled in wet stucco, representing cupids, birds, animals, and graceful foliage, designed with great taste, and moulded with wonderful skill; each figure or group is enclosed in a moulded panel, with egg and dart enrichments round it. The manner in which this passage connects the house with the *crypto-porticus* of Caligula makes it very probable that this so-called "*House of Livia*" is the House of Caligula's father Germanicus, into which the murderers of Caligula escaped after stabbing him in the passage, while he was returning to his palace from some theatrical shows in the *Area Palatina*, which was probably the site now occupied by the Flavian Palace; this is described by Josephus, *Ant. Jud.* xix. i. 2, and by Suet. *Cal.* 58. In any case this house is certainly earlier than the time of Germanicus, and was probably built during the reign of Augustus. Near it is a row of small vaulted chambers opening on to a paved road which leads towards the cliff overhanging the *Velabrum;* these look like shops, and have travertine thresholds grooved for wooden shop-fronts; they are supposed to belong to the *Domus Tiberiana*, but are probably later than the reign of Tiberius.

The Domus Augustana and the Area of Apollo.[1]

Nothing of this marvellous group of buildings is now visible; but a portion of this site was excavated in the sixteenth century, and the Palace of Augustus in 1775, when its plan was published by Guattani, *Monumenti Antichi inediti di Roma*, 1785; and from the drawings made then the plan given (No. 48 on fig. 10) is taken. At present a nunnery (the Villa Mills) stands over the ruins of Augustus's Palace; and the foundations of this modern building have probably destroyed much that was seen by Guattani.

The *Palace of Augustus*, though a very handsome building, rich with Greek and Oriental marbles, was but small compared to the enormous palaces of the succeeding emperors. It stood in a noble position, near the edge of the cliff towards the *Vallis Murcia* and the *Circus Maximus*, with a fine view of the Aventine Hill opposite. The Villa Mills now covers most of its site, and no part of it is visible above ground. The palace consisted of a large *Peristyle*, surrounded with rooms on all sides, two stories high; the *Peristyle* itself was in two stories, having a second tier of columns over the first. None of the surrounding rooms are large, but they appear to have been very graceful in proportion, with rich marble panelling and pilasters on the walls; the ceilings were domed or with barrel vaults, and the walls contained many niches for statues. The floors had simple mosaics or coloured marbles in patterns, like that of the Flavian (so-called) *Library;* and the whole house appears to have been designed with great taste and elegance, very unlike the gigantic and somewhat coarse splendours of the later palaces. A very good set of drawings, plans, sections, and details are given by Guattani in the above mentioned work, now doubly valuable, as no other record

[1] See a very valuable paper on this subject by Lanciani, in *Bull. Com. Arch. Rom.* IV. 1883.

exists of what this most interesting of imperial residences once was like.

The *Area of Apollo*, which occupied a large part of the centre of the Palatine (see 47, on fig. 10), was approached from a road leading out of the *Summa Sacra Via*, along the line of the modern Via di S. Bonaventura. The entrance, through lofty marble *Propylæa*, probably the "*Arcus*" of Pliny[1] (*Hist. Nat.* xxxvi. 4), led into a very large open *Peristyle*, surrounded with at least 52 Corinthian columns of the rich Numidian *giallo antico;* the rest of the building was of white marble from Luna and Hymettus.

In the middle of this great *Peristyle* or *Porticus* stood the great *Octastyle peripteral Temple of Apollo Palatinus*, so called to distinguish it from another Temple of Apollo, outside the *Porta Carmentalis*, of which remains exist under the Albergo di Catena near the Piazza Montanara. This temple was begun by Augustus in 36 B.C., after his Sicilian victory over Sextus Pompeius (Dion Cass. xlix. 15), and it was dedicated in 28 B.C. The Ancyræan inscription records — TEMPLVM · APOLLINIS · IN · SOLO · MAGNAM · PARTEM · EMPTO · FECI. See also Dion Cass. liii. 1; and *Cor. In. Lat.* i. p. 403. Propertius, who was present at its consecration, gives a glowing account of its splendours (*El.* II. iii.), which must have surpassed anything that existed even in magnificent Rome, not only from the beauty of its materials and architecture, but also from the countless works of art it contained in gold, silver, ivory, gilt bronze, and marble, many of which were the work of the great Greek sculptors of bygone days, and others by the scarcely inferior Greek artists who thronged Rome in the Augustan Age. Inside the *Cella* of the temple were statues of Apollo by Scopas, Latona by Praxiteles, and Diana by Timotheus (Pliny, *Hist. Nat.* xxxvi. 4); round the walls were statues of the nine muses (see Juv. vii. 37).

[1] In an ædicula or shrine on this archway stood a group of Apollo and Diana in a quadriga, by the sculptor Lysias, cut out of one block of marble (Pliny, *Hist. Nat.* xxxvi. 4).

In the *Ætos* of the Pediment was sculpture by Bupalos and Archermos (Pliny, *sup. cit.*), and on its apex stood a magnificent colossal group of Apollo in a quadriga made of gilt bronze. The folding doors were covered with ivory reliefs, representing the fate of Niobe's children, and the discomfiture of the Gaulish pillagers at Delphi by the apparition of Apollo holding the ægis. No less than eighty silver statues of Augustus had been presented to him by various donors; and in the Ancyræan inscription Augustus records that he sold these statues of himself, and with the proceeds presented "golden gifts" to the Temple of Apollo,[1] dedicating them jointly in his own name, and in that of the original donors of the silver statues.

Under the statue of Apollo was a secret chamber, in which the Sibylline books were preserved, and they continued in safety during more than one fire which did much injury to the Temple; the books even survived the great fire of 363 A.D., which utterly ruined the whole of this group of buildings (Ammian. xxiii. 3).

Within the *Cella* was a large collection of statues, tripods, vases, and other works of art in gold and silver (Suet. *Aug.* 52), as well as a very valuable collection of engraved gems, dedicated by the young Marcellus, whose premature death was so grievous a blow to his uncle Augustus (see Pliny, *Hist. Nat.* xxxvii. 5).

The sides of the great *Peristyle* were flanked by two large halls used as libraries, one for Greek, the other for Latin books (see Suet. *Aug.* 29; and Schol. ad Juv. i. 128).[2] A third side of the Peristyle was occupied by another still larger hall, in which Augustus, when old and failing in

[1] According to Suetonius (*Aug.* 52) Augustus made the eighty statues into silver tripods dedicated to Apollo; but the official record of the Ancyræan inscription must be accepted as being the more accurate account.

[2] Librarians of various grades were appointed to each of these libraries (see *Cor. In. Lat.* vii. 2, 5188, 5189, 4233, 5190, etc.)

health, used occasionally to convene the senate (Tac. *Ann.* ii. 37). In this hall stood the gilt bronze colossal statue of Augustus, 50 feet high (Pliny, *Hist. Nat.* xxxiv. 18); and on its walls were portrait reliefs of celebrated writers.

Between the Numidian columns of the *Peristyle* stood 50 statues of the Danaids, and opposite each Danaid, an equestrian statue of her murdered bridegroom[1] (see Schol. ad Pers. ii. 56; and Ovid, *Trist.* III. i. 61.

Many fragments of these statues, and some pieces of the fluted columns of Numidian *giallo*, were found in the time of Pope Alexander VII., and again in 1869. See Vacca, *Memorie*, 77, vol. iv. of Nardini, *Roma Ant.*, ed. Nibby, 1820.

In the middle of the open area, in front of the steps of the Temple, was an altar, surrounded by the celebrated statues of four oxen by the Greek sculptor Myron—

> "*Atque aram circum steterant armenta Myronis,*
> *Quatuor, artificis vivida signa, boves.*"
>
> Prop. *El.* II. iii. 7.

A great many fine pieces of sculpture have been found at different times among the remains of these buildings; one of the most beautiful is the ancient marble copy of the Apollo Sauroctonos of Praxiteles, now in the Vatican.

Behind this great *Peristyle*, between it and the Palace of Augustus, a small round *Temple of Vesta*, a copy probably of the ancient one by the *Forum Magnum*, was built by Augustus when he was elected *Pontifex Maximus* in 12 B.C. On that occasion he gave the *Regia* (the official residence of the Pontiff) to the Vestal Virgins; and having built himself a palace adjoining the *Area of Apollo Palatinus*, he built near it a new temple to Vesta, in order that he, in his quality of chief Pontiff, might live (as had always been the case) with a temple to Vesta close to his door (Ovid, *Fast.* iv, 949, and *Metam.* xv, 864; see also *Cor. In. Lat.* i. p. 392). The circular

[1] Murdered, all except one (see Hor. *Od.* III. xi. 21-52).

temple, discovered in the 16th century on this part of the Palatine, was probably Augustus's *temple of Vesta;* a sketch of it is given in a MS. by Ligorio, *Cod. Ursin. Vat.* 3439, fol. 25; and is reproduced by Lanciani, *Bull. Com. Arch. Rom.* 1883, tav. xvii.

Within the *Area of Apollo* was also a mysterious object, which appears to have symbolised the ancient *Roma Quadrata;* this sacred object, which was probably a cubical block of stone used as an altar, was called *Roma Quadrata*, and was surrounded by a circular trench, the *Mundus*, a symbol of the mystic plough-turned furrow, by which the *pomœrium* or sacred circuit-line was marked, in accordance with the primitive religious ceremonies performed while founding a new city.

The Temple of Victory, which gave its name to the *Clivus Victoriæ*, was originally built on the site of a pre-historic altar to Victory (Dionys. i. 32); in 294 B.C. it was rebuilt by the Consul L. Postumius Megellus (Liv. x. 33); and in 193 B.C., M. Porcius Cato built near it another small *œdicula* to Victory (Liv. xxxv. 9).

The temple was rebuilt by Augustus, and restored by later emperors; it is shown on a rare bronze medallion of Gordianus III., with a domed cella and projecting portico, on the pediment of which is inscribed NEIKH . ΟΠΛΟΦΟΡΟΣ . or "*Armed Victory.*" See Grueber, *Roman Medallions*, London, 1874, pl. xlii.

In 1725–8, excavations on the slope of the Palatine towards the church of S. Maria Liberatrice, brought to light considerable remains of this *Temple of Victory*, and fragments of its inscribed frieze. Its columns were of Numidian *giallo*, and the rest of white Parian marble. See Bianchini, *Pal. dei Cesari*, 1738, p. 236.

The Palace of Caligula.

The Palace of Caligula occupies a very large area of the northern angle of the Palatine, the original contour of which

was very much cut away and altered to form a site for this gigantic building,[1] which spread not only over a large space on the top of the hill, but also over the sacred *Grove of Vesta*, and the ground once occupied by the houses of Clodius, Cicero, and other wealthy Romans (see p. 94). With the *Lucus Vestæ* the *Sacellum Volupiæ* and the altar of *Aius loquens* must have been destroyed or moved.

The palace extends across the ancient *Clivus Victoriæ*, which, however, was respected by Caligula to the extent that he did not block it up, but raised his palace above it on a series of immensely lofty arches. The lower part of the palace faced on to the Nova Via, which separated it from the *Atrium Vestæ*, and extended along this road nearly as far as the point where it joins the *Summa Sacra Via* by the Arch of Titus. What now exists is little more than the massive and lofty substructures by which Caligula raised, as it were, the lower slopes of the Palatine to a level with its summit, and it was mainly from this highest level that the grand rooms of the palace appear to have been entered. The whole building must have been fully 100 feet high; the rooms of the existing substructures were entered from various levels, the lowest from the *Nova Via*, the next from the foot of the *Clivus Victoriæ*, near the site of the ancient *Porta Romanula*, other rooms from the top of the *Clivus*, where the modern Casino now stands, and lastly the rooms (now destroyed), which were entered from the highest part of the Palatine at its northern angle.

These various levels are connected by numerous staircases, some wide and easy of ascent, like the one on the left immediately on entering the palace at the foot of the *Clivus Victoriæ*, others very steep and narrow; some only 1 foot 9 inches wide start from the right of the *Clivus*. The steps of these narrow stairs, probably only used by slaves, are made of large square tiles of earthenware; those leading up from the *Nova Via* are

[1] The extravagant size of Caligula's Palace is commented on by Pliny (*Hist. Nat.* xxxvi. 24).

of *travertine;* and the more important stairs to the state rooms were of marble on a concrete foundation.

It is impossible to make out the precise uses of a great many of the rooms in the substructions of the palace; many are lighted only by small square openings in the vault, or by borrowed light, while some had no natural light at all, and look as if they could only have been store-rooms. They are probably partly rooms of slaves and soldiers on guard, whose comfort was but little regarded by the Romans. On both the *Nova Via* and the *Clivus Victoriæ* rows of vaulted chambers open, which appear to have been shops, as they have wide openings with long *travertine* thresholds, grooved to hold a movable wooden front and counter, very similar to those in the bazaars of modern Oriental cities. Pivot holes and quadrant-shaped marks on the *travertine* sills show where small side doors in the wooden fronts opened inwards.[1] In many of these chambers simple mosaic floors remain, and traces of painted stucco on the walls.

Looking up to the right, on ascending the *Clivus Victoriæ*, well preserved remains can be seen of the start of what is supposed to be the bridge by which Caligula connected the Palatine and the *Capitolium* (see p. 173). This is partly supported on large corbels carrying a series of low arches; the soffit of these and the side of the bridge are richly decorated with delicate reliefs, modelled in stucco, of figures and foliage, in a network of panelling with enriched mouldings, all once covered with coloured decoration, and designed with great skill and beauty of effect. The floor of the bridge has simple mosaic, and at one point its marble balustrade still remains *in situ*, formed of light openwork in white marble, imitating wooden tresselling, with round bosses to emphasise the intersection of the cross

[1] All Roman shops appear to have been arranged with these wooden fronts and small side doors; these can be clearly traced in the row of shops in the curved side of Trajan's Forum against the Quirinal Hill (see p. 276), and in many other places.

pieces. This special design for ballustrading appears to have been universally used in Rome; other existing *cancelli* or screens, such as those in the *Flavian Basilica* and the fragments in the Forum from the *Rostra* and the *Basilica Julia*, resemble this one even in the details of the moulded plinth and capping.

Several small rooms or ante-chambers, through which the emperor must have passed on his way to the bridge, are richly decorated with a combination of coloured stucco reliefs and painting on the flat, very gorgeous in effect, but which must have been almost invisible from want of light except that of lamps, especially when the whole of the upper vaulting was perfect.

On the right of the higher part of the *Clivus Victoriæ* are a number of larger rooms, once covered with marble linings, which were probably part of the emperor's state apartments; at the back of these a large number of extensive dark substructures reach to the end of Caligula's *Crypto-porticus*, and it was above these that the emperor's chief state rooms appear to have been, but are now almost completely gone. The modern *Casino* is built upon part of these massive under-chambers some of which were evidently used for grinding corn, baking bread, and other domestic purposes.

The methods of construction employed in Caligula's Palace are worthy of attention.

The lower part, that between the *Clivus Victoriæ* and the *Nova Via*, is of concrete faced with mixed brickwork and *opus reticulatum;* all quoins and inner angles, and all the facing arches, have the brick lining, but the central space of each wall is faced with the tufa *opus reticulatum*, alternating with bands of brick facing, one foot deep. In this sort of work, which is a transition from the old *opus reticulatum* to complete facing of brick, the use of cut tufa voussoirs for arches, or rectangular blocks for angles, is avoided.[1]

[1] The finest example in Rome of this mixed use of brick and *opus reticulatum* facing is to be seen in the lower walls of the *Thermæ of Titus*, where they cut through the remains of Nero's *Golden House*.

In the upper part of the palace none but brick facing is used; it is very sound, solid work, but not quite so neat as other rather later examples. The bricks are of the usual triangular form, about 12 inches long by $1\frac{1}{4}$ to $1\frac{1}{2}$ thick, with joints $\frac{3}{8}$ to $\frac{1}{2}$ inch. At intervals of about 2 feet 6 inches one bond-course of tiles, 2 Roman feet square, is built into the concrete of the wall and passes through its whole thickness; these tiles are about 2 inches thick.

The concrete core of the walls is either of broken bits of brick or tufa, or both mixed; in some places a few bits of white marble are mixed with the other materials of the concrete; occasionally broken travertine replaces the tufa or brick fragments.[1] Earthenware socketed pipes, about a foot in diameter, are built into the concrete wall at intervals all over the building, reaching from the lowest to the highest points of the walls; some of these are smoke flues, others are rain-water down-pipes.

The vaulting and arches of the whole building are cast by pouring fluid concrete on to wooden centering; in some places numbers of *amphoræ* are imbedded in the vaults to diminish the weight on its haunches. None of the fine brick-facing was originally left visible: the whole of it was either covered with painted stucco or with marble linings. A thick coat of cement backing was laid between the marble slabs and the smooth brick facing, the whole surface of which was studded with large iron nails or marble plugs, to form a key or hold for the cement backing or stucco facing. The foundation walls are of *lava* concrete, cast in wooden framing; the impress of the wooden uprights is visible at regular intervals.

From near the entrance to Caligula's Palace at the *Porta Romanula* a wide flight of steps descends to the

[1] This variety of material comes from the fact that all the broken bits of marble, stone, or brick, which otherwise would have been wasted, were utilised for making the concrete for the walls.

Nova Via,[1] and thence probably continues down to the Forum under the modern Church of S. Maria Liberatrice. The lower stage of these steps (not yet excavated) is partly shown on the last discovered fragment of the marble plan (see pl. of Forum and fig. 10), passing in a sloping direction towards the *Temple of Castor*. These steps are partly cut in the tufa rock of the hill: they were once lined with marble, and appear from the character of the brick-facing on the side walls to be contemporary with Caligula's palace. It is probable that an earlier flight of steps existed here in the reign of Augustus.

The *Crypto-porticus* (No. 19 on fig. 10), probably that in which Caligula was murdered, starts from the substructions of his palace, near the "*Temple of Jupiter Stator*," and runs for about 130 yards in a straight line, till it reaches the short, richly decorated part, which leads into the house supposed to be that of Germanicus (see p. 104). This long semi-subterranean passage was covered with a barrel vault, ornamented in parts by painting, and in other parts by mosaics of mixed marble and glass *tesseræ*. It was lighted by a series of windows on one side, formed in the springing of the vaulted roof: the floor was of simple mosaics, and the walls were covered with slabs of polished marble, fixed by clamps of iron and bronze, many of which still remain; on the north-west side two staircases lead up to the higher level of the hill overlooking the *Vicus Tuscus*.

At the further end of this passage, a short branch, at right angles, leads under the ground to the *Flavian Palace;* and a staircase at its termination communicates with an ante-room behind the apse of the *Flavian Basilica;* evidently so arranged that the emperor could pass to and from his seat in the Tribune of the *Basilica* by a quite private way, unseen and uninterrupted by the crowd of suitors or lawyers who thronged the emperor's Hall of Justice. This branch passage is not earlier than the

[1] See p. 136 for an account of the *Nova Via*, and classical references to these stairs.

Flavian Palace, and part of it has been rebuilt in the reign of Severus; other restorations of the time of Severus, very carelessly executed, are visible in the short passage from it to the "house of Germanicus or Livia." These later walls have cut through and destroyed a great deal of the beautiful stucco reliefs on the vaulting.

CHAPTER IV.

THE PALATINE HILL (*continued*).

The Flavian Palace of Domitian was the next great addition to the buildings by which the Roman emperors gradually covered the whole of the Palatine Hill. (See fig. 10.)

The enormous theft of land from the Roman people which Nero had accomplished in order to build his Golden House was atoned for by the politic Vespasian and Titus, who destroyed the sumptuous Palace of Nero, and devoted a great part of its site to the pleasures of the people, by building the *Colosseum* and the great *Thermæ of Titus* on the Esquiline. Partly no doubt to make up for this great loss of Imperial state rooms, Domitian built on the central part of the Palatine Hill a very large and magnificent series of public rooms, the south-west part of which flanked the house of Augustus, while on the other side they were connected with the palace of Caligula by the *Crypto-porticus* mentioned above. This great building of Domitian contained no private rooms or domestic offices; it was merely a vast series of state apartments,[1] and was an adjunct to the earlier palaces, which the emperors continued to use for all private purposes. The construction of this great palace caused very important changes to be made in the contour of the hill at this part: it is raised on a very

[1] To impress on the Roman people the public character of this palace the Emperor Nerva (according to the younger Pliny), inscribed outside it the words AEDES · PVBLICAE.

large and lofty platform, forming a great level area, which in parts is high above the natural surface of the ground. The manner in which this platform has covered an ancient house is described at p. 92, and in a similar way another house, of the early part of the first century A.D., is buried under the floor of Domitian's great *Peristyle*.

This house was built in a valley which appears once to have divided the Palatine Hill into two portions; this depression was filled and obliterated by the Flavian Palace being built over it at a level even higher than that of the rising ground on each side. Steps have been formed down to the buried house under the *Peristyle*, so that part of it is now visible, together with the great concrete foundation walls of the palace above, which cut through and have partially destroyed this once richly decorated little house. Part of its walls and vaults, decorated with moulded panels of stucco and painted ornaments, are still in good preservation; as is also part of its very beautiful floor, covered with polished Oriental marbles of unusual brilliance and richness. The concrete foundations which cut through this house show clearly the Roman method of casting concrete walls with a framework of upright timbers and planking, forming a sort of long box, into which the semi-fluid concrete was poured. The imprint of the upright stakes, which left deep grooves $7\frac{1}{2}$ inches wide by 6 inches deep, are as fresh as if the concrete had only just set; and so are the marks of the horizontal boards 8 inches wide, nailed against the upright posts, which were set at intervals of 3 feet.

The palace of Domitian, with all its splendour of wall-linings, and columns of rich marbles, and the countless statues which adorned it, are enthusiastically described by the courtier-poet Statius (*Silv.* iv. 11, 18), who gives an account of a banquet given by Domitian, at which he was present, in terms of the most exaggerated adulation.

This palace (see plan on fig. 10) consists of a large

open *Peristyle*, or *Porticus*, as the Romans called it, and round it are grouped the various public state-rooms of which the palace consists. The *Peristyle* was a sort of cloister, open in the middle, and surrounded with a Corinthian colonnade two stories high. The shafts of the columns, and the fluted pilasters against the walls, were of the rich purple-marked *pavonazetto* from Phrygia, with capitals, bases, and entablatures of white Luna marble.

The walls were lined with coloured Oriental marbles, highly polished, and divided into panels with moulded framing. A good deal of the moulded plinth of this wall-lining is still *in situ;* the lower part is of the golden yellow *giallo* of Numidia; the upper part was arranged to give highly decorative effects by varying the panels and framing with different combinations of all the different coloured marbles used in Rome, with an admixture of the even more gorgeous red and green porphyries and Egyptian alabaster. In parts gray and red granite from Egypt were used, and many large monolithic columns were of these granites. The pavement was of similar Oriental marbles, in large slabs. There was probably a statue between each pair of columns.

The *Triclinium*, or state-banqueting room, opens out of the south-west side of the *Peristyle*. It was decorated in an even more gorgeous way, with marble and porphyry columns, statues, and wall-linings. The emperor's seat at table was in a slightly curved recess, like an apse, opposite the entrance from the *Peristyle;* and the pavement of this, part of which is still well preserved, is the most beautiful ancient example that yet exists in Rome. The patterns are simple—circles within squares, leaf-like curved figures, and the like, but the rich colours of the materials used, and the skill with which they are arranged, so as each to enhance the brilliance of the pieces next to it, give the whole an effect of much splendour. Red porphyry, green basalt, and many different-coloured marbles are used in this *opus sectile* pavement.

The room on the south-east of the *Triclinium* has not been excavated, as the ground is still in the possession of the nuns of the Villa Mills; but the room opposite is fairly well-preserved. It is a *Nymphæum*, or marble-lined room, with niches for statues; in the centre is an elaborate oval fountain, with water basin, into which jets poured from the central raised part, containing statues of nymphs and water-gods, which were arranged in a series of small semicircular recesses; aquatic plants and flowers in pots were probably set among the statues. Some large windows open from the *Triclinium* into the *Nymphæum*, so that the banqueters would be cooled and refreshed by the splash of the falling water and the scent of the flowers. The floor was of the rich Oriental alabaster, from Arabia or Egypt.

On the north-west side of the *Peristyle* is a row of small rooms, all once richly decorated with coloured marbles and statues; a similar series of rooms, probably, occupies the corresponding position, as yet unexcavated, on the opposite side. The north-east side of the *Peristyle* is mainly occupied by the grand *throne-room*, where the emperor gave receptions on state occasions. This was, architecturally, the most magnificent hall of all; it was surrounded by colossal statues cut in porphyry and green basalt,[1] set in seven large niches, alter-

[1] There is no stronger symptom of the decadence in taste which was growing in Rome at the end of the first century A.D. than the liking which was then beginning for statues carved in these enormously hard substances, the brilliant colour and markings of which render them quite unfit for sculpture, their chief attraction being their very great cost, and the immense labour that must have been wasted on each. No tool, except some form of the diamond drill, will work these materials, and the process of grinding and drilling them into shape must have been extremely slow; moreover, to bring out the rich colours it was necessary to polish them—a process of great difficulty with the varied contours of a statue. It was from Egypt that the Romans derived their taste for statuary in refractory materials, and probably from the same country they got the special tools

nating with seven richly ornamented doorways, between which were set Corinthian columns of *pavonazetto* and *giallo*, 24 feet high, each a monolith. The entablatures, thresholds, and other parts were of white Pentelic and Luna marble, and the various coloured Oriental marbles lined the walls, the niches, and the floor.

In 1720 to 1726 excavations made here by the Farnese Duke of Parma brought to light an immense quantity of statues, both whole and fragmentary, now scattered in various places, and also much of the rich architectural marble work, including 16 Corinthian columns of *pavonazetto* and *giallo*, fragments of the colossal basalt and porphyry statues, and an enormous door-sill of Pentelic marble, now used as the *mensa* of the high altar in the Pantheon. This Farnese duke owned a great part of the Palatine, which was called after his family the Orti Farnesiani; they were connected with the Neapolitan Royal family.[1] The discoveries then made are described by Bianchini, *Palazzo dei Cesari*, Verona, 1738, and some of the statues by Guattani, *Notizie di Antichità*, 1798.

On the south-east side of the *throne-room* is a room containing an altar, supposed to be the *Lararium* or private chapel of the emperor, and next to it are remains of the grand staircase which led to the upper story, now entirely destroyed. All this part had similar wall-linings of rich marbles.

The *Basilica*, or Imperial Court of Justice, on the opposite side of the *Lararium*, is of special interest. Though its upper gallery over the aisles is gone, yet it is not impos-

required to work them (see p. 18). Pliny (*Hist. Nat.* xxxvi. 11) mentions as a great curiosity a statue made of porphyry, which was brought from Egypt as a present to the emperor Claudius; Pliny's good taste did not approve of it—"Non admodum probata novitate. Nemo certe postea imitatus est"—showing that at least till the middle of the first century no porphyry statue had been made in Rome.

[1] Hence many of the statues discovered here are now in the Museum of Naples.

sible to make a fairly complete restoration of the whole hall, which is by far the best-preserved example of that special form of the classical *Basilica* which afterwards became the model, almost unaltered, for the Christian church. As will be seen from the plan (fig. 10, No. 29), it is a rectangular hall, with an aisle on each side, and a semicircular apse at the end opposite the public entrance. The aisles had each six bays, with slender Corinthian columns, unfluted, but once decorated with metal ornaments, probably of gilt bronze; the pins for fixing these still remain in the existing perfect column. Over these was a marble entablature and an upper gallery, exactly similar in arrangement to the early Christian *gynecæum* or women's gallery, as existing in the Roman churches of the *Quattro Santi Incoronati* and *S. Agnese fuori le mura.* Stairs to this gallery start from the colonnade outside, on the north-west, and other stairs wind up behind the apse.

At the apsidal end was the emperor's seat of judgment, and the whole apse is screened off from the nave or body of the hall by open marble *cancelli*, with pilasters at the end; designed with the trestle pattern, mentioned above as existing along "Caligula's bridge."

This screened-off tribune in the Christian Church became the *presbytery* or sanctuary, afterwards called the *chancel*, from the *cancelli*,[1] and the celebrant occupied the central throne. Part of the colonnade which once extended outside on the front towards the *Sacra Via* formed a porch to the public entrance to the *Basilica*, corresponding to the *narthex* of the early Christian Church.

On each side of the apse is a private door leading to the rest of the palace, and also (more immediately) to the stairs which descend to the *Crypto-porticus*, which formed a private approach from the Flavian Palace to the older Palace of Caligula (see above, p. 114).

[1] The chief secretary of the court sat within the railing, and was hence called the *cancellarius*, the origin of our word *chancellor*.

The marble decorations of the *Basilica* were similar to those of the rest of the palace. The floor had a fine pavement of Oriental marbles, apparently a restoration of the time of Severus; the marble slabs were bedded on an under-paving of large earthenware tiles, which bear the maker's stamp, and a common augury of good luck — CN · DOMITI · AMANDI—VALEAT · QVI · FECIT · — "May the maker thrive."

The outside of this palace had a handsome colonnade, once two stories high, with unfluted columns of *cipollino* at the end, and *travertine* at the side.

The whole stands on a lofty *podium*, and the end towards the *Porta Mugonia* and the *Sacra Via* occupies a very commanding position, rising high above the slope of the hill. At the other end of the palace, towards the Circus Maximus, is an outlying block of handsome buildings, which have been with some probability called a *library* and *lecture-hall* (*bibliotheca* and *academia*), though nothing is really known of their names or use.

Of the former but little remains except some fine paving of Oriental marbles, with simple patterns of squares set diagonally within other squares, a very often repeated pattern in Roman pavements. A row of *cipollino* columns, with Corinthian capitals and bases of white marble, has been set along the side of this room by Comm. Rosa, but it is doubtful whether they stood so originally. Below the floor at this part remains are visible of the fine Republican house mentioned at p. 92. The next room, supposed to be the *academia*, has one end curved, and seats rise against the walls in tiers, with rows of niches above them. The whole was richly decorated with marble linings.

The concrete foundations of the building are made of fragments of the hard *lava* (used for roads); above that the walls are of concrete mostly made of broken brick, or in part bits of travertine, with a little marble. Among the late resto-

rations of the third century some walls occur made wholly of marble concrete, mixed with a few bits of porphyry.[1]

The brick-facing which covers the concrete walls is of the characteristic Flavian type, with rather thick triangular bricks, very regular in appearance, set in the most excellent cement. They average rather over $1\frac{1}{2}$ inches in thickness, by 12 inches long; the joints vary from $\frac{1}{2}$ to $\frac{5}{8}$ inch. The whole surface of this brick-facing is studded with the usual iron nails and marble plugs, but in some cases bronze is used instead of iron. The clamps which held the marble linings in their place were mostly of bronze. At intervals, of from 4 to 5 feet, bond tiles, two Roman feet square, are built in through the whole thickness of the concrete walls.

The vaults were partly of brick concrete and partly of *tufa*, or pumice-stone concrete.

In the outer walls, at regular intervals, channels running upwards are formed in the face of the wall, about 12 × 10 inches, to hold the socketed smoke-flue or rain-water pipes.

The travertine colonnade on the outside of the palace was covered with the usual marble stucco, and decorated with painting.

In many places signs of extensive rebuilding and restorations are evident, especially those carried out by Severus, after a fire in A.D. 191, which devastated a great part of the Palatine buildings. Much of the existing marble decorations of the palace appear to be of the time of Severus.

Even in the fourth century alterations were being made, and by the *Nymphæum* there is a wall, faced with "*Opus mixtum*," of small tufa blocks and brick courses set alternately —always a sign of late work.[2]

[1] Probably after damage by a fire all the injured marble columns and wall-linings would be broken up to make concrete for the new walls.

[2] The great Circus of Maxentius on the Via Appia, built soon after 300 A.D., is probably one of the earliest instances in or near Rome of the use of this method of wall facing.

The "Domus Gelotiana."

Outside the walls of Roma Quadrata, about the middle of the slope towards the *Circus*, are extensive remains of a house, which, on insufficient evidence, has been supposed to be the *Domus Gelotiana*, from which Caligula is recorded to have watched the races in the *Circus* below (see Suet. *Cal.* 18). Little, however, which still exists of this building appears to be as early in date as the time of Caligula.

This once extensive house is built against the remains of the "*Wall of Romulus*," and over a spur-wall belonging to the primitive fortifications which runs at an angle from the main line of the circuit down the slope. The house consists of a series of small vaulted rooms, once several stories high, with a *Porticus* or colonnade of Corinthian columns in front, at its lower level. This *Porticus*, which is mostly a modern restoration, appears to have been of the time of Severus. The rooms were partly lined with marble, and partly covered with painted stucco; in one part, by the staircase, a second painted coat has been laid over an earlier decorated layer. One of the most interesting things about this building is the large number of *graffiti*, or incised inscriptions, which are deeply cut into the plaster. One of these, now in the Museo Kircheriano, is the rude drawing of a crucified man with the head of an ass or jackal, and a standing figure, apparently in act of adoration, with the rudely scratched inscription ΑΛΕΞΑΜΕΝΟC CEBETE ΘΕΟΝ (Αλεξάμενος σέβεται Θεόν; *i.e.* "Alexamenos worships God"), this is usually taken to be a caricature of the crucified Christ, but is more probably a scene of *Gnostic* worship.

Many of the inscriptions have now crumbled away, and others are rapidly following. One, now wholly gone, had a sketch of an ass turning a corn-mill, with the superscription LABORA · ASELLE · QVOMODO · EGO · LABORAVI · ET ·

PRODERIT · TIBI. "Work, O Ass, as I have worked, and it will profit thee."

Others seem to show that this building was used at one time as a school for imperial slaves, *e.g.*

CORIN THVS · EXIT DE · PEDAGOGIO.	and	MARIANVS AFER · EXIT DE · PEDAGOGIV.

"Corinthus (or Marianus Afer) goes out of school."

A number of names appear to have been scratched by soldiers: some which still exist are HILARVS · MI · V · D · N, *i.e.* "Hilarus Miles Veteranus Domini Nostri" (the Emperor): ЄПІТΥΝΧΑΝΟС V · D · N; a mixture of Greek and Roman letters: "*Epitynchanos Veteranus Domini Nostri.*" Other names which occur are C · EMELEVS · AFER; DORYPHORVS; ASIATICVS; AKINΘOC; and ROGATVS; with many varieties of blundered spelling. The same name sometimes occurs written both with Greek and Latin characters, *e.g.* ΦΗΛΙΚΙ. . . ; FELICIS. It has been supposed from these soldiers' names that the building was in part a guard-house, for guards on duty about the Imperial palaces. After one pair of names is inscribed PEREG, implying that they belong to the Corps called *Peregrini* or "*Foreign regiment*," whose Camp was on the Cœlian Hill, see *Notitia*, *Reg.* ii.

The Palatine Stadium.

On the southern side of that elevated plateau which was occupied by the *Area of Apollo* and the *House of Augustus*, there appears to have been a sudden fall of the level, down to a long valley, which lent itself readily to the formation of a *Stadium* or racecourse. Its plan is shown on fig. 10 No. 50, it occupies a very large area, having the exposed end very

slightly curved,[1] and a sort of aisle or colonnade, once two stories high, running all round it.

This enormous building, of which little or no record exists in any classical writings, appears to have been begun by Domitian, mostly built by Hadrian, and either finished, or in parts rebuilt, by Severus. The earliest part is the whole outer wall, with the curved projection or *exedra* on one side, and a few of the piers of the colonnade near the excavated end.

The brick facings of the time of Domitian and of Hadrian, are so similar in character, that it is often difficult to distinguish between them. Some brick stamps, however, in the facing of the outer wall are of the Flavian period, and seem to show that the *Stadium* was at least begun by Domitian; one of the marks is · FLAVI · AVG · L · CLONI ·, that is "*of Clonius a freedman of the Flavian Augustus.*" In the curved recess, however, and other parts of the outer wall, brick stamps of Hadrian's time appear. The brick facing of Severus is easily distinguishable, being very different in appearance to that of Hadrian (see p. 130). Like other buildings on the Palatine this was wholly covered with fine marbles. The engaged columns of the ambulatory all round the *Stadium*, are of concrete neatly faced with moulded bricks, and then covered with marble casing; many of the moulded Corinthian bases of these columns still remain *in situ*. The capitals and their entablature were of solid Greek marble; in spite of the Corinthian moulding of the bases, the capitals, a few of which exist, are of the Tuscan order. The intervals between the piers with their half columns were filled in by *cancelli* or low marble screens, with richly moulded plinth, which was simply a continuation of the base-moulding of the engaged columns. One pier near the recess has still *in situ* the return of this moulding, and its start along the plinth of the screen. Behind each pier there is a corresponding pilaster

[1] This is the starting end, the other is not yet excavated.

on the face of the outer wall, against which once stood a marble column. Strange to say, all these wall pilasters, and all the piers with half columns, except a few at the curved end, are of the time of Severus, showing either that the *Stadium* was left by Hadrian in a very unfinished state, or else that it had suffered so much from fire or earthquake as to need a very extensive rebuilding by Severus. The lower part of the great Apse of Hadrian, is divided into several rooms, the barrel vaults of which supported an upper floor, which was probably a sort of enormous state box, from whence the Imperial party watched the games below. The upper gallery over the colonnade all round must also have held a large number of spectators. The semi-circular *piscinæ* or fountains at the end and one side, are late additions; and in the fourth and fifth centuries the building appears to have been clumsily altered, and cut up into separate rooms for some purpose, quite different from that of a racecourse.

These later additions are built in places over the rich marble linings in the most ruthless and brutal way, and the level of the floor appears then to have been raised about 2 feet above the old paving. Some of these walls are faced with the ugly brickwork of the fourth century, while others have "*opus mixtum*," brick and tufa alternating. The complete decay into which this once magnificent building had even then fallen, is clearly shown by the materials of which the concrete of these latest walls is made; namely broken pieces of rich oriental marbles, with large quantities of the valuable red porphyry and green basalt. It appears probable that these last alterations were the work of the Gothic King Theodoric, in about A.D. 500.[1]

[1] Theodoric's enlightened good taste and respect for antiquity led him to do very much in Rome not only to stop the pillaging of temples and public buildings, but also in actual works of restoration and repair. He spent large sums in this way on the Forum and Basilica of Trajan, the Baths of Caracalla, and other buildings.

Hadrian's Palace.

Along the south side of the great *Stadium*, and at its western end were a large number of very handsome and extensive rooms, which once formed a large palace, part of which overlooked the *Circus Maximus*, while another part occupied the higher level of the hill behind the great apsidal recess.

This palace, built by Hadrian, is now mostly destroyed, partly through the fall of its lofty buildings on the slope leading to the *Circus*, and partly because it was destroyed and buried by Sept. Severus, when he built his extensive and enormously lofty palace over the southern angle and slopes of the Palatine. With care, however, much of Hadrian's palace can still be traced, and some idea formed of its original magnificence.

Outside the curved end of the *Stadium*, parts of its lofty upper vaulting with deep-sunk *lacunaria*, are still standing; and further remains, insignificant in height, were exposed in the summer of 1884, extending towards the slope of the hill. The many fragments of rich architectural decorations found here show that it was adorned with unusual magnificence and delicacy of detail: elaborate mouldings, cornices, plinths, and the like, were found, cut not only in the usual oriental marbles, but also in the rarer deep red *Rosso antico*, and the refractory red and green porphyries. Oriental Alabaster appears to have been used for several of the pavements, and the whole building must have been a glowing mass of rich polished stones in countless variety of tint, while the vaults had their sunk coffers richly decorated with elaborate mouldings in stucco, all brilliantly coloured, and picked out with gilding.

One handsomely vaulted room, on the south side of the *stadium*, near the curved end, is still in a very perfect state, but is partly choked up by rubbish. It has a large window open-

ing in the *stadium*, and communicates by a staircase with the upper rooms of Hadrian's palace. The ceiling is formed by intersecting barrel vaults, decorated very richly with deep *lacunaria*, with elaborate stucco mouldings and central rosettes. This room also communicates with a row of small vaulted chambers, opening one into the other, and facing on the road which leads from the end of the *stadium* downwards to the valley of the Cœlian, under the lofty arches of Severus's palace.[1]

Other rooms of Hadrian's palace can be traced, half concealed under the complicated and extensive substructures of Severus's palace. Delicate stucco reliefs still exist in rooms which are cut through by the foundation walls of Severus's building, and are now quite shut off from light. Wooden steps at several places have been fixed, so that the visitor can traverse these interesting and somewhat puzzling remains, passing through them from the road by the *stadium*, and reaching at last the higher ground at the top of the hill.

The reason for the destruction of so large a part of Hadrian's palace by Severus arose from the fact that in the palace of the latter emperor the whole of the state-rooms and baths were raised to the higher level above the top of the Palatine, and not built, as some of Hadrian's handsome rooms were, on the lower slopes of the hill. It is the gigantic substructures by which Severus raised the chief floor of his palace to an enormous height, that have buried and partly obliterated the last-mentioned portions of Hadrian's palace.

In addition to these low-lying rooms, other parts of Hadrian's palace are built on the top of the hill, and considerable remains of these exist at the back of the apsidal recess of the *stadium*. These rooms are very lofty, and have similarly vaulted ceilings, with enriched stucco coffers, all once elaborately coloured and gilt. They extend some way southwards from the back of the apse, and join on to the palace of Severus. The great difference in the brick facing of these two

[1] This road has not yet been excavated to its old level.

buildings makes it very easy to distinguish one from the other, even when their walls are mixed in a very intricate way.

The brick-work of both is equally sound and neat, but in Hadrian's building the bricks are thicker and the joints thinner, namely—*bricks*, 1½ inch; *joints*, ½ inch: In Severus's work —*bricks*, 1 inch; *joints*, ¾ inch.[1] In both cases lumps of tufa and broken bricks are used for the concrete mass of the walls, and usually concrete made of *lava* for the foundations.

Palace of Severus.

Comparatively little remains of the once lofty and magnificent state apartments which occupied the south corner of the Palatine, and extended over its slopes into the valley by the Cœlian Hill.

The chief existing remains on the top of the hill are those of one of the grand marble staircases leading to the upper rooms, of which no other portion now remains.[2] Near this there are extensive ruins of baths and *nymphæa*, reaching as far as the *stadium*, and stretching over the buried remains of Hadrian's lower palace. These baths were all sumptuously decorated in the usual way with marble linings and enrichments of porphyry, alabaster, and brilliant glass mosaics, many of the coloured *tesseræ* of which still lie thick among the rubbish.

The methods of heating with *hypocausts* and walls covered

[1] These are the *average* dimensions. The bricks of Severus are hard well-burnt triangles, 12 to 14 inches long; their stamps show that they were made of clay from imperial brickfields—OP·DOL·EX·PR·DOMINI·N·AVG·—*i.e. Opus doliare ex prædis Domini nostri Augusti*, "Earthenware from the estates of our lord Augustus." Names of various brick-makers occur.

[2] Scattered around are many large fragments of the concrete vaulting which supported the upper floors, paved with coarse mosaics.

with flue-tiles can be well studied here, and remarkable examples exist showing the enormous strength and cohesion of the Roman concrete.

Instead of the upper floor or *suspensura* being carried on a number of little pillars (*pilæ*), in many of the rooms it has no support whatever except at its edges, so that the whole concrete floor is treated as if it were one immense slab of stone, having in some cases a bearing of 20 feet or more. In some of the rooms there are deep, strangely-formed chambers below the *lower* floor of the *hypocausts*, the use of which is quite inexplicable; probably they are only waste spaces occasioned by the necessity to raise the floor of the baths to a high level on tall foundation-walls. It is difficult, from the scanty existing remains of the upper portion of this palace, to realise what its immense extent and height must have once been. It not only towered many stories above the highest summit of the hill, but also reached far beyond the hill, extending over the slope and into the valley below. This outlying part of the palace, built at the lower level, was constructed on immense arches and tiers of vaulted substructions, forming an enormous platform, equal in height to the hill itself, and then on this platform, already of stupendous height, a great part of the actual palace was built, rising high above it, as if this platform had been the natural level of the ground. Or, to put it in another form, the Palatine hill was enlarged at this southern part by an artificial hill of massive concrete walls and vaults.

One portion of this great platform, built of tiers of lofty arches, now reaches out towards the south in a sort of isolated promontory, but originally the great gap between this and the baths on the hill was filled up and bridged over with similar lofty substructions which have now fallen. Below this a road sloped steeply down to the valley, forming one of the main approaches to the Palatine. This has not yet been excavated to its original level, and the paving of the road still remains buried in parts, up to the lower tier of arches which spanned

it like a series of bridges. They really are *flying buttresses*, like those which cross the *Nova Via* from the *Palace of Caligula* to the *Atrium Vestæ*. The arches of the lofty platform, under which this road passes, like the rest of the palace are built of the usual hard rock-like concrete, in many respects even more durable than masonry. The whole is faced with the very neat though wide-jointed brick-work, which is characteristic of about the years 190 to 250 A.D.

Travertine corbels are built in at the springing of all these arches; these were to support the wooden centering or framework on which the semi-fluid concrete was cast into the required form of arches and vaults, and has the double advantage of doing away with the necessity for lofty wooden scaffolding to support the centering, and also made future repairs or rebuilding comparatively easy.[1]

The substructions of Severus's Palace, which are built more immediately against the slope of the southern angle of the hill, contain a large series of kitchens and other domestic offices, which are well worthy of attention though rather devoid of light. Part of the arrangements for a plentiful supply of aqueduct water are at one point well preserved, and can be visited through a vaulted room which opens at the lower level, near the foot of the eighteenth century staircase which leads from near the descending road up to the top of the hill. On passing through this vaulted chamber towards the inner rooms the end of a sloping water-channel, like the *specus* of an aqueduct, is reached. The top of this is now gone, and the *specus* itself forms a convenient passage, leading at a gentle slope into a series of large water-cisterns like small vaulted rooms, two of which are well preserved. Both these and the channel are lined with the hard water-proof cement (*Opus signinum*) which was specially used for hydraulic purposes.

[1] Similar corbels for centering at the springing of arches are to be seen in the Roman bridges across the Tiber, in many of the aqueducts, and in other places.

These cisterns are arranged at different levels, with communicating openings, so as to overflow from one to the other, and are made to supply different parts of the lower rooms of the palace. A narrow and steep flight of stairs descends into the upper cistern, so that it could be reached for repairs or cleaning. The steps are coated with *Opus signinum* like the rest of the cisterns, and the whole surface, including that of the *specus*, is covered with a hard deposit of carbonate of lime, in many thin successive layers, such as was usually formed by the rather hard water brought by the aqueducts.[1]

The water-channel leads to rooms which appear to have been kitchens, sculleries, and the like, and through these a communication exists with the upper portions of the palace on the top of the hill.

The Septizonium was an outlying part of Severus's Palace, in the valley at the south angle of the hill, which was once remarkable for its architectural magnificence and its great height. It stood near the point where the continuation of the *Via Appia*, within the *Porta Capena* of the Servian wall, led to the end of the *Circus Maximus*. This was the road by which travellers from Africa, and the south generally, approached Rome, and the *Septizonium* is said to have been built here by Severus in order that his African fellow-countrymen might be impressed with his magnificence immediately on entering the walls of Rome; Spartian. *Sept. Sev.* 24. Its name was probably derived from its seven stories or *zonæ* of colonnades towering one above another. It has been doubted whether the *Septizonium* can really have been as many as seven stories high, but this does not seem impossible or even improbable when the immense height of the main block of the palace is considered.[2]

The three lower stories of this building, with handsome

[1] This process of deposit is still rapidly going on in all the cisterns and pipes which supply modern Rome with aqueduct water.

[2] See a valuable paper by Jordan, *Bull. Inst.*, 1872, p. 145.

marble columns and other decorations, existed as late as the reign of Sixtus V. (1585-90), who destroyed it in order to use its columns and marble entablatures in the new Basilica of S. Peter. Drawings of it, as then existing, are given by Du Perac in his *Vestigj di Roma*, 1575, and in other works of the sixteenth century.

Towards the *Circus Maximus* another lofty block is built, projecting farther down the western slope of the hill. This has been supposed to be an Imperial *Pulvinar*, or building from which the emperor could watch the races in the circus below. It appears mainly to be the work of Heliogabalus and Severus Alexander, who both added to and restored the Palace of Sept. Severus. See Dion Cass. lxxii. 24; and *Hist. Aug. Sept. Sev.* 19, 24; *Sev. Alex.* 24, 25, and *Heliog.* 3, 8, 24.

The *Velia* and the *Germalus* or *Cermalus* were two outlying parts of the Palatine Hill: Varro, *Lin. Lat.* v. 54—"*huic (Palatio) Germalum et Velias conjunxerunt . . . Germalum a germanis Romulo et Remo, quod ad Ficum Ruminalem ibi inventi sunt.*"

The position and extent of the *Germalus* are very doubtful, but it probably was some ridge at the western angle of the Palatine, near the corner between the *Velabrum* and the *Circus Maximus*. Owing to the great alterations that have been made in the contour of the hill, both in its lower slopes and higher points, it is now very difficult to define these primitive districts.

The *Velia* may, however, with much probability, be identified with the ridge between the Palatine and the Esquiline, on which the remains of the *Temple of Venus and Rome* now stand, and which is crossed by the *Summa Sacra Via* under the Arch of Titus. This was evidently once much loftier than it is now; part of its native tufa rock is visible where it has been cut away to form a level area for the temple; and, moreover, the extent to which the foundation of Nero's palace on

the edge of the Esquiline, near the temple, are exposed to sight, shows that in Nero's time the ground here was much higher than at present. From 20 to 30 feet high of rough foundation-wall is now laid bare.

Tullus Hostilius is said to have had a house on the *Velia*, where afterwards the *Ædes Penatium* stood: Solinus, *Polyhist.* i.)—"*Tullus Hostilius* (*habitavit*) *in Velia, ubi postea Deum Penatum ædes facta est.*"

That the *Velia* was once a ridge of more commanding height is shown by the story of P. Valerius Publicola's house, which he began to build on this hill; but, being suspected by his fellow-citizens of entertaining too ambitious views, he rebuilt it on a more humble site, at the foot of the *Velia*, instead of on its summit. See Cic. *De Rep.* ii. 31; and Livy, ii. 7.[1]

The *ædes Penatium* and the *ædes Larum* on the *Summa Sacra Via* were rebuilt by Augustus, as is recorded in the inscription of Ancyra—AEDEM · LARVM · IN · SVMMA · SACRA · VIA · AEDEM · DEVM · PENATIVM · IN · VELIA . . . FECI.

The *ædes Larum* is probably the same as the *Sacellum Larum*, mentioned by Tacitus (*Ann.* xii. 24) as one of the points in the line of the *Pomœrium*, round *Roma Quadrata* (see p. 47).

Varro (*Lin. Lat.* v. 54) derives the word *Velia* from *vellera*, the fleeces of the sheep that pastured there; but more probably it is derived from a root *Fέλος*, meaning a marsh, as in *Vel*abrum.[2]

The site of the *Velabrum* can be identified with greater

[1] This act of humility was so highly appreciated that at the death of Publicola the Senate voted him the very unusual honour of a tomb within the city walls—*σύνεγγυς τῆς ἀγορᾶς*, Dionys. v. 48.

[2] Varro, *Lin. Lat.* v. 43, derives *Velabrum*, "*a vehendo*," from the ferry across its marshy pools; but Dionysius more correctly gives the word *velus*, a marsh, as its origin.

precision. It is part, if not all, of the long valley which runs from near the river, at the end of the Circus Maximus, past the cliff of the Palatine to the lowest point of the *Forum Magnum*, where the *Cloaca Maxima* passes under the *Basilica Julia*. A record of its name still exists in the church of *S. Giorgio in Velabro*. Its position is described by Varro (*Lin. Lat.* vi. 24)—"*Extra urbem antiquam* (i.e. *Roma Quadrata*) *fuit, non longe a porta Romanula*"; and in another place as being at the foot of the ascent to the *Infima Nova Via*; it was a district full of shops. See Plaut. *Capt.* III. i. 29; and Hor. *Sat.* II. iii. 229.

The *Vicus Tuscus* passes through it on its course from the *Forum Magnum* to the *Circus Maximus*: see Dionys. v. 26. The marble gateway erected in honour of Severus and his sons by the silversmiths and other merchants of the quarter formed an entrance from the *Velabrum* into the *Forum Boarium* (cf. Dionys. i. 40).

Whether the Velabrum extended so far as the *Forum Magnum* or not is doubtful, nor is it possible to identify its subdivisions into *Velabrum minus* and *majus* (see Varro, *Lin. Lat.* v. 43 and 156), except that the former was probably near the Forum, and the latter at the end towards the Aventine. It is indeed possible that these terms refer to pools of water, quite distinct from the district called generally the *Velabrum*.

Among the most interesting excavations of recent years has been that of the *Nova Via*, from close by the church of S. Maria Liberatrice to its junction with the road which leads up the Palatine to the *Porta Mugonia*, starting close by the *Summa Sacra Via* at the Arch of Titus (see fig. 10).

It appears originally to have skirted the sacred *Grove of Vesta* (Livy, v. 32, 50; and Cic. *De Div.* i. 45), but the site of this is now occupied by the great palace of Caligula, remains of which face on to almost the whole side of its course, as far as it has yet been excavated.

On the opposite side a long piece of the frontage of the

Nova Via is occupied by the *Atrium Vestæ;* and a series of arches, spanning the road, act as flying buttresses to support both the palace and the *Atrium* (see figs. 10 and 21).

Ovid (*Fast.* vi. 395) speaks of a staircase descending from the *Nova Via* to the Forum—"*qua Nova Romano nunc Via juncta Foro est.*" These steps appear to be shown on the marble plan, and were a continuation of those leading up from the *Nova Via* to the *Clivus Victoriæ*, just outside the *Porta Romanula* (see above, p. 55).[1]

The upper end of the *Nova Via*, where it joined the road to the *Porta Mugonia*, was known as the *Summa Nova Via* (see Solinus, i. 24); and the lower end, where it sloped down to the *Velabrum*, was the *Infima Nova Via.* This part of its course has not yet been determined, but it appears probable that it continued to skirt the lower slopes of the Palatine, turning, at the north angle of the hill, round in a south-westerly direction, and slanting down till it reached the valley of the *Velabrum.*

In spite of its name the *Nova Via* was a very ancient road, even in the time of Varro, first century B.C.[2] An interesting account of this road is given by Lanciani, *Notizie degli scavi*, 1882, p. 234. The discovery of a crossroad leading up from the *Sacra Via*, and passing behind the *Atrium Vestæ* to the *Nova Via*, is mentioned below, p. 196. (See fig. 21.)

In the summer of 1884 a number of interesting remains of buildings were excavated on both sides of the *Nova Via*, at its highest end. On the Palatine side were a series of vaulted rooms, which appear to be part of Caligula's palace, though much of the walls belong to a later rebuilding. Among these

[1] It is not improbable that these are the *Scalæ Anulariæ* by which Augustus once lived (Suet. *Aug.* 72).

[2] This is often the case with buildings that are called *new*. *New*gate was the oldest of the London gates; *New* College is among the most ancient foundations of Oxford; and *New* Bridge one of the oldest in Oxfordshire.

are remains of a very wide and handsome staircase, which must once have formed the chief approach to Caligula's Palace from its lowest level; the whole of its marble steps and wall-linings have been taken away.

On the opposite side of the road are a number of chambers, with stairs which led up to higher stories. The earliest of these appear to be of Caligula's time. Facing on to the road is also a curious public fountain in a much ruined state; two or more rectangular shallow tanks or basins, lined with *Opus signinum*, are still fairly perfect.

At the *Summa Nova Via*, near the Arch of Titus, are a few remains of what was probably a large and very magnificent temple. Among these is a large fluted drum of a Corinthian column, made of the Phrygian *pavonazetto*, and some enormous open rain-water channels, sunk in immense blocks of white Athenian marble, which probably surrounded this sumptuous building. These may possibly belong to the Ædes Penatium, rebuilt by Augustus; but, if so, it must have been a temple of greater importance in point of size than its rare mention in classical writings would lead one to believe.

The Sacra Via. That part of this ancient road which passes through the *Forum Magnum* is described in Chap. V.; but the name in its wider sense included much that was beyond the Forum.[1]

The start of the *Sacra Via* was at the *Sacellum Streniæ*, the goddess of new-year gifts (French *Étrennes*), an unknown point on the Esquiline (Varro, *Lin. Lat.* v. 47), which probably was somewhere in the quarter now occupied by the Baths of Titus, a portion of the hill known as *Cerolia:* thence it probably (after 80 A.D.) skirted the Colosseum, and then ascended the ridge to the Arch of Titus, which spans it at the highest

[1] This road was called *Sacra* from its having been traditionally the scene of the solemn treaty concluded between Romulus and the Sabine King Tatius: Festus, ed. *Müller*, p. 290; or possibly from its skirting the *Temple of Vesta*, the *Regia*, and other buildings of great sanctity.

point, called *Summa Sacra Via.* Thence to the *Temple of Castor* its original course has been diverted; but it probably once wound round a little to the north-east, and formed a sort of loop, passing by the *Regia;* from the *Regia* it passed by the great flight of steps in front of the *Temple of Castor*, and so on to its termination on the Arx of the Capitoline Hill.

The existing lava-paved road follows a different line, and was probably altered under the Empire; it now turns from the Arch of Titus at a sharp angle towards the front of Constantine Basilica, where it becomes very wide,[1] and then on by the *Temple of Faustina* to the cross road in front of the *Temple of Divus Julius*, which leads it back to its original course by the *Basilica Julia;* it is, however, doubtful whether in late time the *Sacra Via* did not continue on to the Arch of Severus, and so up the *Clivus Capitolinus*, instead of passing, as it did originally, along the south-west side of the Forum. The whole of the existing lava paving is very late in date, with the single exception of the bit in front of the steps of the *Temple of Saturn* (see p. 156, fig. 15). The well-known description of Horace's walk along the Sacra Via (*Sat.* I. ix.) makes it clear that at least in his time it passed along the old line, skirting the *Temple of Vesta* and the *Basilica Julia.*

The *Sacra Via*, in its course from the "*Meta Sudans*" to the Arch of Titus, passes a number of interesting buildings on its left; the whole of this distance on the right is occupied by Hadrian's great *Temple of Venus and Rome.* On the left are extensive remains of baths, the marble linings of which, and the flue-tiles on the walls are in some places well preserved. The brick facing of the walls is of that neat and regular sort, with very thin bricks and thick joints, which is characteristic of the time of Heliogabalus and Severus Alexander—the bricks being only about 1 inch thick and the joints $\frac{3}{4}$ to 1 inch, by only 9 inches in length.

[1] Anastasius Bibliothecarius, in his *Life of S. Felix IV.*, speaks of the Church of S.S. Cosmas and Damian as being in the *Via Sacra.*

One small Bath-room, with apsidal end, is specially well preserved, and is a valuable example of Roman methods of heating. It contains two small marble-lined baths, one square and the other semi-circular, filling in the space included by the little apse; each have marble steps for the bather to descend by. The curved wall of the apse is partly open, and had two small columns supporting the wall above the opening. The floor is over a *hypocaust*, and the whole interior of the room, including the baths, is lined with square flue-tiles held by strong pieces of ⊤ iron to the wall.

In the middle of these baths a very remarkable building has been erected, probably in the fifth century, which De Rossi considers to be a Christian Basilica, that of *S. Maria Antiqua*. The older brick-faced walls of the baths are used for this building wherever they happen to come in the right place, and the rest of the walling is faced with "*Opus mixtum*" of brick and tufa.

The plan of this building is a long nave without aisles, with an apsidal end and two small transepts. The part between the transepts is marked off from the nave by a step and two marble columns, which look as if they defined the beginning of the chancel; and the whole aspect of the building is exactly that of a Christian church. One point, however, throws doubt upon this, and that is, that in the apse, in the place which ought to be occupied by the altar, there stands a most unmistakable fountain or marble-lined cistern, semi-circular in form, concentric with the curve of the apse, and leaving a very narrow passage between it and the apse wall.

This structure appears certainly not later than the apse itself, and if so, its presence is almost fatal to the theory of this building being a Christian Basilica. Another semi-circular cistern or bath at the other end of the "nave" is not inconsistent with the "church" theory, as it might be a font; it is lined with the most magnificent varieties of Oriental alabaster.

Another part of this curious building is almost inexplicable in use—a very small subterranean chamber, almost below the steps between the two columns of the "chancel"; it is approached from the "nave" by a narrow steep stair of sixteen steps: the top of this little chamber appears to have communicated with the floor above by a shaft made of clay pipes, such as were used for flues. If this had been under the site of the altar it might have been taken for the *confessio*, or tomb of some saint, which always existed under the altars of primitive churches, but it is not near the apse.

All the marble decorations of this building have evidently been stolen from some earlier one; the floor in the "transepts" and other places is paved with bits of Oriental marbles, rudely broken into squares of about 2 inches, a method of paving which was much used in the artistically degraded centuries which immediately followed the transference of the seat of the Empire to Constantinople.

The whole cliff of the Palatine which overlooks this part of the *Sacra Via* is hidden by remains of Nero's enormous palace, which reached over the *Sacra Via* and the whole great valley where the Colosseum now stands, and covered a large space on the top of the Esquiline (see below, p. 347). The part which is built against this cliff of the Palatine consisted of several stories of small vaulted chambers, the lower of which only remain, though the marks of the vaults of the upper rooms can be seen on the lofty wall which here masks the hill. This lofty structure is built on an immensely thick and solid stratum of concrete, made of broken lava, the most endurable building material perhaps ever used. The lower rooms are paved with simple mosaics or herring-bone brickwork, and the walls are studded in the usual way with iron nails to hold the stucco. The brick lining is very neat in appearance, made of hard well-burnt bricks, red and yellow in colour; the brick-facing of the arches is particularly regular and sightly, made of the usual 2 feet square tiles broken into

2 or 3, with (at rare intervals) a whole tile inserted in the arch; none, however, of this beautiful brick facing was left visible, as it was all covered with stucco. The vaults are of concrete made of tufa.

In front and partly blocking up some of these under-chambers of Nero's palace there is an enormous mass of *lava* concrete near the top of the hill or Summa Sacra Via. This is a gigantic platform, about 100 feet long and 12 feet high at its highest point, where it is formed into five great steps. On it are remains of some very massive building of unknown use, built of very large blocks of *peperino* and *travertine* mixed; some of the latter measure 8 feet by 4, by 3 feet thick. This building has been almost wholly destroyed for the sake of its valuable blocks of stone, and no idea can now be formed of its original appearance. It is probably of Flavian date, being later than the adjacent parts of Nero's palace; and its immense blocks of stone are such as were largely used in the buildings of Vespasian and Titus. Upon the ruins of this great building are some very thick walls of concrete, made of broken marble, and rudely faced with other fragments of marble. These belong to a very strong mediæval fortress which once stood here; it was partly built over the Arch of Titus; and was called the *Turris Cartularia*, or Record Tower; it was more than once used as a stronghold or place of refuge by the Popes, especially in the eleventh and twelfth centuries.

Along the later line of the *Sacra Via*, and skirting the *Atrium Vestæ*, there are remains of a long sort of *Porticus*, evidently late in date, the massive foundations of which, made of rudely cast concrete, at several places cut into the remains of the *Regia* (see p. 187). The level of the floor of this long building was considerably above that of the more ancient *Regia*. The upper part of this *Porticus* appears to have been of travertine, nearly all of which has been stolen for building materials; it probably dates from the fourth century, and

Comm. Lanciani has suggested that it is the *Porticus Margaritaria* mentioned in the *Notitia* Catalogue, Reg. viii. Other late buildings, once faced with marble, stand on this line, nearer to the *Sacra Via:* some appear to have been shops, and others have signs of having been baths. A large apsidal recess faces the *Sacra Via* near this point (see p. 187), it too was once ornamented with rich marbles, but its purpose is doubtful.

CHAPTER V.

THE FORUM MAGNUM AND ITS ADJACENT BUILDINGS.[1]

At that remote period in the legendary history of Rome, when the Palatine and Capitoline Hills were still occupied by separate fortified villages, inhabited by hostile tribes, the intermediate valley which afterwards became the chief centre of Roman life—political, social, and religious—was a marshy morass in which, especially during rainy seasons, were large pools of stagnant water. At times it was, however, sufficiently dry to form a battlefield, and it is said to have been the scene of repeated struggles between the Sabines of the Capitol and the Latins of *Roma Quadrata*. A part of it, which afterwards became the *Comitium*, was the neutral ground where the chiefs of both races formed their alliances, or held councils for united action after the political union of the two settlements under one king.

The construction by Tarquinius Priscus of the great *Cloaca*, which still runs across the Forum at its lowest point, was the first step towards the construction of the magnificent group of buildings which gradually grew up around it; it did this by draining off the pools of water, and turning its marshy soil into firm dry ground, available for the foundations of its temples and basilicas, and having a central paved area, which remained dry even during the most rainy seasons.

The memory of two of the marshy pools of this valley was preserved down to imperial times, though in what form it

[1] The plate showing the most recent discoveries in the Forum will be found at the end of the volume.

is difficult to say—probably as marble enclosures of some architectural elaboration.

One of these was the *Lacus Curtius* (Livy, i. 38 and 56), the draining of which by the *Cloaca* is mentioned by Varro (*Lin. Lat.* v. 148-9). According to one tradition, it marked the spot where Curtius closed the portentous chasm which had opened in the Forum by flinging himself into it (Dionys. ii. 41). In the time of Augustus it appears to have been an enclosed space containing an altar (Suet. *Aug.* 57), and is thus described by Ovid (*Fast.* vi. 403):—

> "*Curtius ille lacus, siccas qui sustinet aras,*
> *Nunc solida est tellus, sed lacus ante fuit.*"

Another was the *Lacus Servilius*, memorable as the place where Sulla exposed the heads of the senators murdered under his proscriptions: Cic. *Rosc. Am.* 32; and Seneca, *De Prov.* 3.

Other monuments of the Forum which date from a prehistoric period were the *Altar of Saturn* (Dionys. i. 34, and vi. 1), where the *Temple of Saturn* now stands; it was set up, according to the legend, by the companions of Hercules. There was also an *Altar of Vulcan* on the lower slopes of the Capitoline Hill, behind the Arch of Severus. This gave its name to the *Area Vulcani* or *Hephæsteum*, used, like the *Comitium*, at least during the regal period, as a place of public meeting (Dionys. ii. 50, vi. 67; Pliny, *Hist. Nat.* xvi. 86; and Plutarch, *Quæs. Rom.* 47).

The *Temple of Vesta* also dates from a very remote period, being traditionally founded by Numa Pompilius; or, according to another legend, by Romulus. Dionysius (ii. 65), however, sensibly remarks that so important a shrine would not have been built outside the walls of *Roma Quadrata*, which included the whole city of Romulus, and attributes it therefore to Numa (see below, p. 181).

In the reign of Tarquinius Priscus the central open space of the Forum is said first to have taken a definite shape by the construction of shops and houses round it—"*ab eodem rege* (*Tarquinio*), *et circa Forum privatis ædificanda divisa sunt loca,*

porticus tabernæque factæ; Liv. i. 35. These shops on the south-west, facing on the *Sacra Via*, where the *Basilica Julia* was afterwards built, were called the *tabernæ veteres* (Livy, xliv. 16), while those on the opposite side were called *tabernæ argentariæ*, shops of silversmiths and bankers (Livy, xxvi. 27, and xl. 51); when these were rebuilt after a fire they were called *tabernæ novæ*, and the two long sides of the Forum are frequently referred to by classical writers as *sub veteribus* and *sub novis*. Cicero (*Acad. Pr.* ii. 22) speaks of these as being respectively the shady and sunny sides of the Forum.

The *Temple of Janus* was one of the earliest buildings of Rome, founded, according to Livy (i. 19), by Numa. It stood near the *Curia*, on the north-east side of the Forum, at the verge of a district called the *Argiletum*.

This short list includes all the buildings in the Forum, the origin of which is traditionally referred to a period earlier than the establishment of the Republic.

The *Temple of Castor*, the next in point of date, is described in the order of its position in the Forum (see p. 174).

Unlike the *Fora* of the Emperors, each of which was surrounded by a lofty wall, and was built at one time from one complete design, the architectural form of the *Forum Magnum* was a slow growth.

The marshy battlefield of early times became, under a united rule, the most convenient site for political meetings, commercial transactions, public shows, and the pageants exhibited at the funerals of the rich. It was here that one of the first gladiatorial fights was held in 216 B.C.; and the Forum continued to be used for this purpose as late as the reign of Augustus: see Livy, xxiii. 30, xxxi. 50, xli. 28; Suet. *Cæs.* 39, *Aug.* 43, and *Tib.* 7.[1]

[1] The earliest gladiatorial show given in Rome was that at the funeral of D. Junius Brutus's father, in 264 B.C., held in the *Forum Boarium*—the cattle-market and shambles—an appropriate place for the scenes of butchery for which the Romans gradually acquired a love (Livy, *Epit.* xvi.)

For these various purposes a central space, though but a small one, was kept clear of buildings; and this was gradually encroached upon by an ever-increasing crowd of statues and other honorary monuments, some of which were occasionally cleared away, by order of the senate, when they had become inconveniently numerous. Seats of wood and fences were temporarily erected, and awnings were spread to protect the spectators from the sun.[1] In some cases public banquets were given as a termination to the fights or theatrical representations. This was done after the three days' entertainments at the funeral of the chief Pontiff P. Licinius Crassus, 183 B.C., in which 120 gladiators were engaged.

The central area of the Forum was bounded (at least under the empire) by three roads, forming a level paved space about 375 feet long, by 150 feet wide at the Capitoline end, and 110 feet wide at the other end. The paving is of thick slabs of travertine, averaging from 3 to 6 feet square. Most of this is obviously late in date, probably of the third or fourth century. Other parts, where the slabs are more uniform and neatly fitted, appear to be considerably earlier.

On those parts where the earlier paving still exists there is a curious series of incised lines, shown on the Forum plate, which seem to have divided the Forum into compartments. The use of these lines is unknown, but they may possibly have had something to do with the marshalling of voters of the *Comitia Tributa*, whose place of assembly was the Forum. One primitive way of keeping each tribe in its right place for orderly advance to the ballot-box was by ropes stretched on rows of wooden posts (*septa*). See Dionys. vii. 59.

The *Comitia Tributa* was formed of the *Plebs* or Plebeian class, while the *Populus* or Patricians formed the *Comitia*

[1] Pliny (*Hist. Nat.* xix. 1) mentions awnings put over the Forum by J. Cæsar. Dionysius (liii. 31) says they were of silk; and (lix. 23) records that in the reign of Augustus they remained the whole of a hot summer.

Curiata, and held assemblies on the *Comitium*, a level area which adjoined the Forum on its north-east side. Plutarch (*Rom.* 19) mentions it as a meeting-place for the chiefs of the Sabines and Latins. According to Cicero (*Rep.* ii. 17) the *Comitium* was first surrounded with a fence or screen by Tullus Hostilius—". . . *fecitque idem, et sepsit de manubiis Comitium et Curiam.*"

The positions of the *Comitium* and *Curia* have been among the most disputed problems connected with the topography of the Forum. From the *Curia* or senate-house a flight of steps led down to the *Comitium*—"*Statua Atti . . . in comitio, in gradibus ipsis ad lævam Curiæ fuit*" (Livy, i. 36). On the Comitium stood the ancient *Rostra*, and adjoining it was the *Græcostasis* or platform on which foreign ambassadors stood to hear the speeches from the *Rostra* and *Comitium*.

A very valuable passage of Varro (*Lin. Lat.* v. 155) describes the buildings at this end of the Forum :—

"COMITIUM, *ab eo quod coibant eo comitiis curiatis et litium causa.* CURIÆ *duorum generum, nam et ubi curarent sacerdotes res divinas, ut* CURIÆ VETERES,[1] *et ubi Senatus humanas, ut* CURIA HOSTILIA, *quod primum ædificavit Hostilius Rex. Ante hanc* ROSTRA : *quojus loci id vocabulum, quod ex hostibus capta fixa sunt rostra. Sub dextra hujus a comitio locus substructus, ubi nationum subsisterent legati qui ad Senatum essent missi. Is* GRÆCOSTASIS *appellatus, a parte ut multa.* SENACULUM *supra* GRÆCOSTASIM *ubi* ÆDIS CONCORDIÆ *et* BASILICA OPIMIA. SENACULUM *vocatum ubi Senatus, aut ubi Seniores consisterent.*"

Again, Livy (xlv. 24) speaks of the "*Comitium vestibulum Curiæ.*"

It will thus be seen that the position of the *Curia* gives the key to that of a number of other very important buildings, and the identification of its site will enable us to fix with

[1] The *Curiæ Veteres* was one of the buildings on the slopes of the Palatine, which Tacitus mentions to indicate the line of the walls of *Roma Quadrata* and the *Pomœrium*. Its site is now unknown.

some degree of certainty the sites of most of the structures mentioned by Varro in the above-quoted passage.[1]

The chief place of meeting of the Roman Senate was called the *Curia* from the thirty tribes or *Curiæ* into which Romulus was said to have divided the *Populus*, after an alliance had been made between the Latins and Sabines. Livy (i. 30) records that Tullus Hostilius enlarged a temple, and made it into the *Curia*, which from his name was called the *Curia Hostilia*—a title which lasted till the building was burnt during the riot at the funeral of Clodius in 52 B.C. It was then rebuilt by Faustus Cornelius Sulla, the son of the dictator, under the name of the *Curia Cornelia* (Dion Cass. xl. 50); but, owing to party jealousy, was soon after pulled down and rebuilt by Augustus, 29 B.C., its name being changed to *Curia Julia* in honour of J. Cæsar. This is recorded in the inscription of Ancyra—CVRIAM · ET · CONTINENS · EI · CHALCIDICVM . . . FECI.

Little is known about the *Chalcidicum* and another adjoining building called the *Athenæum*, both of which are mentioned by Dion Cassius (li. 22) in connection with the *Curia Julia* (*τὸ βουλευτήριον τὸ Ἰουλίειον*).

The *Curia* was burnt and rebuilt in the reign of Domitian (Hieron. An. XCII., i. p. 443), and, lastly, was again rebuilt after a fire by Diocletian: see *Catal. Imp. Vienn.* printed by Preller, *Regionen der Stadt Rom.* p. 143.

Without going through all the evidence on the subject, suffice it to say that there are many strong reasons for believing that the Church of S. Adriano is the *Curia* of Diocletian, though greatly altered and partly rebuilt. The end towards the Forum is the best preserved part (see fig. 14). This is of concrete, with the usual brick facing, and the whole was once covered with fine hard stucco, divided into lines of

[1] The *Curia* was an inaugurated building, and therefore a *templum*, but not *sanctum*, as is explained by Varro, *Lin. Lat.* vi. 10. In the same way the *Comitium* was a *templum*, though not roofed over.

false joints, so as to imitate marble blocks. The cornice is of brick covered with enriched mouldings in stucco, and has a series of marble consoles. A close examination of the brick facing with its sham relieving arches, and the stucco and

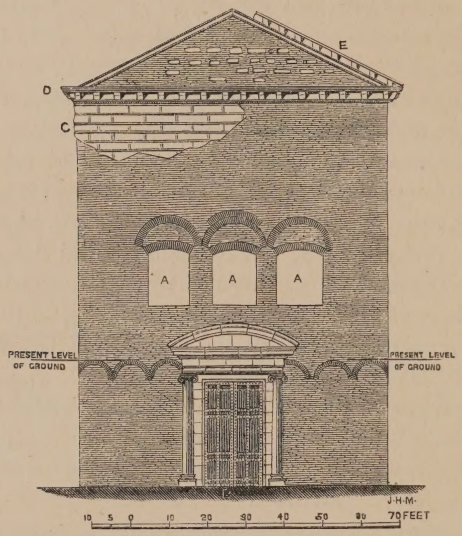

Fig. 14.

Curia rebuilt by Diocletian, now the Church of S. Adriano; shown as it was in the sixteenth century.

AAA. Original windows now blocked up.

B. Bronze doors, now in the Lateran; the marble doorway does not now exist, but is shown by Du Perac.

C. Stucco facing.

D. Cornice with marble consoles, and enriched stucco mouldings; both existing.

E. Raking cornice now gone, but shown by Du Perac.

marble details, show that this is clearly a building of classical times, which closely resembles, even in minute details of the cornice and imitation marble blocks, parts of the baths of Diocletian.

The present level of the church is nearly 20 feet above

that of the Forum; but the old level existed as late as the sixteenth century, and was reached by a flight of steps descending to the large bronze doors, which then formed the entrance to the building; this is shown by Du Perac, in his *Vestigj di Roma*, a very valuable set of drawings made about the middle of the sixteenth century. These ancient bronze doors, probably earlier than the time of Diocletian, were removed by Alexander VII., and now form the principal entrance to the Lateran Basilica; and at the same time the lower part of the building was filled in with earth, and the level of the floor raised to its present height.

Fig. 14 shows the end of the building, the upper part taken from measurements of that portion which is now visible, while the lower part is derived from measurements of the bronze doors, which give the size of the opening, and show how deeply the original level is buried below the present road; the columns and marble architrave of the door are taken from Du Perac's drawing.

This being the *Curia*, we may conclude that the site of the *Comitium* is probably below the present road in front of the door. It was a paved area, not roofed over, but surrounded with some kind of screen or fence, probably in imperial times of marble decorated with sculpture. What the level of the *Comitium* was in relation to the Forum has been a much controverted point; no clear indication as to this is given by any classical writer,[1] though it has usually been assumed that the Comitium was higher than the Forum. Recent excavations have, however, exposed the verge of a paved area near the Arch of Severus, which appears to extend towards the supposed *Comitium* under the modern road (see plate of Forum). This is about 2 feet *below* the level of the Forum pavement, whence it is approached by three marble steps, which descend to it.

[1] A complete account of the existing documentary evidence on this subject is given by Mr. Nicholls in his valuable work on the Forum.

The *Comitium* was not only the meeting-place of the Patrician *Comitia Curiata*, but also the chief legal centre of Rome. On it the *Triumviri Capitales* heard criminal cases, and saw punishments, both scourgings and executions, carried out. Foreign envoys were there received by dictators or consuls, and various kinds of important public business was transacted. It was also at times used for games and theatrical shows. For these various purposes wooden seats, desks, platforms, and the like were erected on it; some being merely temporary, such as spectators' seats for the *ludi scenici*, were removed as soon as the show was over. It was with these wooden fittings that the mob built up a funeral pyre for the body of Clodius, causing the destructive fire, during which the ancient *Curia Hostilia* and other buildings were destroyed.

The chief *tribunal* or *suggestum* on the *Comitium*, originally probably a wooden platform, became in time a more permanent structure, and was known as the *Rostra*. This name was given to it after the capture of the Latin fleet at Antium by the consuls Camillus and Moenius,[1] in honour of whose victory the bronze beaks (*rostra*) of the conquered ships were fastened on to the previously existing platform, which thenceforth was known as the *Rostra*—"*Naves Antiatum partim in navalia Romæ subductæ, partim incensæ, rostrisque earum suggestum in Foro exstructum adornari placuit, rostraque id templum*[2] *appellatum;*" Liv. viii. 14. The *Rostra* were the scene of some of the most important political struggles of Rome; from them the Gracchi expounded their laws, and there Cicero delivered his second and third orations against Catiline. On the *Rostra* too were fixed the heads of many of the chief victims of the proscriptions of Marius and Sulla (Appian, *Bell. Civ.* i. 71, 94; and Cic. *Pro Sext.* 35, 36).

[1] Livy (iv. 17) gives the name *Rostra* to the early platform by anticipation.

[2] The word *templum* had a much wider significance than the modern word *temple;* it was applied to any structure that had been consecrated by the Augurs, whatever its use may have been: See Cic., *De Orat.* iii. 3

The *Comitium* and *Rostra* were the chief early sites for honorary statues. One of the earliest of these was the statue of the Augur Attus Navius, who performed the miracle of cutting the whetstone with his razor; this stood, according to Livy (i. 36), by the steps which led up to the *Curia*. Near it was the *Ficus Ruminalis*, a sacred fig-tree, under which Romulus and Remus were found; this was miraculously transported to the *Comitium* from its original place near the Tiber. At the corners of the *Comitium* were erected statues of Pythagoras and Alcibiades, selected by the Romans, in obedience to an oracle from Delphi, as being the wisest and bravest among the Greeks (Pliny, *Hist. Nat.* xxxiv. 12).

The ancient *Rostra* were specially decorated with honorary statues to those Roman ambassadors who had been killed while on foreign service (Liv. iv. 17). These appear to have been removed during Cicero's lifetime (Cic. *Phil.* ix. 2); see also Dion Cass. xliii. 49; and Pliny, *Hist. Nat.* xxxiv. 11.[1]

The *Rostra* remained in their original position on the *Comitium* till 44 B.C., when they were removed by Julius Cæsar to a new site. The existing remains of the *Rostra*, as rebuilt by Cæsar just before his death, are described below.

The *Senaculum*, mentioned in the passage of Varro quoted above, appears to have been a place of preliminary meeting for the Senate before entering the *Curia;* Livy, xli. 27, and Val. Max. ii. 2, 6. It probably adjoined the original *Temple of Concord* on the lower slopes of the Capitoline Hill; and when this was rebuilt on an enlarged scale in the reign of Augustus, it seems not improbable that its large projecting portico became the *Senaculum;* see Dionys. i. 34, and vi. 1. It may possibly have once been identical with the *Area Con-*

[1] An interesting remark is made by Pliny about these very ancient statues. They were, he says, three feet high—"*tripedaneas iis statuas in foro statutas,*" and that this size had specially been used for honorary statues—"*mensura honorata tunc erat.*"

cordiæ which Livy (xl. 19) mentions in connection with the *Area Vulcani* (cf. Liv. xxxix. 46).

A great part of the yet unexcavated north-east side of the Forum was occupied by two large *Basilicæ*, which were more than once rebuilt under different names. The first of these, founded by the Elder Cato in 184 B.C., was called after him the *Basilica Portia* (Liv. xxxix. 44, and Plut. *Cato Major*, 19). It was burnt with the *Curia* at Clodius's funeral.

Adjoining it another *Basilica* called *Æmilia et Fulvia* (Varro, *Lin. Lat.* vi. 4), was built in 179 B.C. by the Censors M. Fulvius and M. Æmilius Lepidus.[1] According to Livy (xl. 51) it stood "*post argentarias novas*," the line of bankers' and silversmiths' shops, which occupied the north-east side of the Forum. At the back of this Basilica was the *Forum Piscatorium* or fish-market (Liv. xl. 51), which was probably absorbed by the later imperial Fora. In 50 B.C. the *Basilica Æmilia* was rebuilt by L. Æmilius Paulus (Plut. *Cæs.* 29), and was more than once restored by members of the same family, under the name of the *Basilica Pauli*. It is said by Pliny (*Hist. Nat.* xxxvi. 24) to have been remarkable for its magnificent columns of Phrygian marble (*pavonazetto*). According to a mediæval tradition the nave columns of the Basilica of S. Paolo fuori le mura are said to have been taken from the ancient *Basilica Pauli*. Most of these noble columns were destroyed in the fire of 1823; a few that escaped are now set against the wall of the apse on each side of the pontifical throne.

Near the middle of the north-east side of the Forum, probably in front of the *Basilica Æmilia*, stood the *Temple of Janus*, a small *ædicula* or shrine, which towards the end of the Republic, or perhaps earlier, was of bronze. It is shown with much minuteness on a First Brass of Nero as a small cella

[1] This Basilica is shown on a denarius of M. Lepidus as a large building with two tiers of columns and a pedimental roof. The legend AIMILIA · S · C · REF · M · LEPIDVS, refers to a restoration in the reign of Tiberius.

without columns, but with richly ornamented frieze and cornice.[1] Its doors were closed on those rare occasions when Rome was at peace with all the world. From the time of its traditional founder, Numa, to that of Livy, it was only twice shut—once after the first Punic war, and secondly after the victory of Augustus at Actium; see Liv. i. 19; the *Monumentum Ancyranum;* and Suet. *Aug.* 22. It contained a very ancient statue, probably by an Etruscan artist, of the double-faced *Janus Bifrons* or *Geminus;* Procop. *Bell. Goth.* i. 25; Pliny (*Hist. Nat.* xxxiv. 16) says that the figure indicated with its fingers the number 355—that is, the number of days reckoned in the Roman year. This miniature temple held another statue of Janus, the sculptor of which, according to Pliny (*Hist. Nat.* xxxvi. 4) was either Scopas or Praxiteles. This uncertainty as to its author (Pliny says) arose partly from the thick gilding of the statue, and also because the enormous number of statues which had been brought to Rome, and the pre-occupation of the people on matters unconnected with art, frequently caused the authorship of statues to be forgotten.

The *Temple of Janus* gave its name to this part of the edge of the Forum, and from the numerous shops of the *argentarii* or bankers and money-lenders which were there, the word *Janus* came to mean the usurers' quarter—

> "*Postquam omnis res mea Janum*
> *Ad medium fracta est. . . .*"—Hor. *Sat.* II. iii. 18.

Another small shrine near this point was the *ædicula of Venus Cluacina* (the *purifier*), which probably stood over the *cloaca maxima* (Liv. iii. 48).

The central area of the Forum is now surrounded by basalt-paved roads (see plate), rudely laid. On the south-west

[1] The legend on this coin is PACE·TERRA·MARIQVE·PARTA·IANVM·CLVSIT. Another bronze *ædicula* by the Forum was that dedicated to Concord (see p. 213). As the bronze was probably thickly gilt, the effect of these little shrines surrounded by white marble must have been very magnificent.

runs the *Sacra Via;* this is the side known as *Sub veteribus*, from the old shops which once stood there. The ancient line of the *Sacra Via* passed by the *Regia*, the *Temple of Vesta*, and the *Temple of Castor*, as indicated on the annexed plan. Its course in front of the *Temple of Castor* is covered with large slabs of travertine, carelessly laid in the fourth or fifth century.

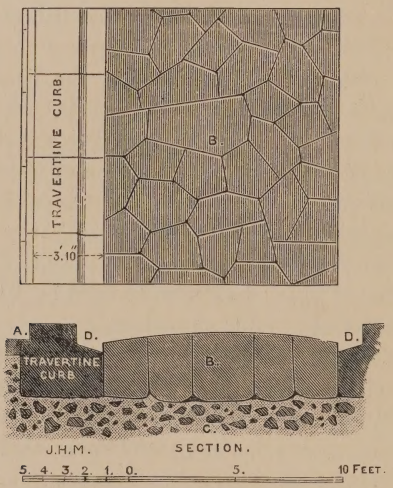

Fig. 15.

Example of early basalt road by the Temple of Saturn on the Clivus Capitolinus (see plate).

A. Travertine paving.
B. Polygonal basalt blocks.
C. Concrete bedding.
D. Rain-water gutter.

The curb shown here is taken from another part of the road.

After passing the *Basilica Julia* the *Sacra Via* begins to ascend the *Clivus Capitolinus*, winding round the steps of the *Temple of Saturn;* at this point there is still remaining a piece of very ancient basalt-paving, probably of Republican date, the blocks of which are fitted with great care and accuracy,

quite unlike the rest of the roads in and about the Forum, which have all had their paving roughly relaid probably in late Imperial times. The road then passes upwards between the *Temple of Saturn* and the *Porticus of the XII Dii Consentes*, winding round the backs of these shrines, and so steeply upwards to the *Asylum* between the *Capitolium* and the *Arx*, passing the great side doorway into the *Tabularium*, in front of which a piece of its paving is again visible.

The road which skirts the other side of the Forum *sub novis*, opposite to the *Sacra Via*, also joins the *Clivus Capitolinus* behind the so-called *Græcostasis*, after passing through the arch of Severus (see p. 217). These two roads are joined by a short cross-road opposite the *Temple of Divus Julius;* a junction which was possibly made when the old line of the *Sacra Via* was built over.

Existing remains in the Forum.

The Rostra continued to be in their original position on the *Comitium* till 44 B.C., when they were rebuilt on a new site by Julius Cæsar. Their removal is mentioned by Cicero, *Phil.* ix. 2; and Dion Cass. xliii. 49; see also Asconius ad. Cic. *Pro. Mil.*—"*Erant enim tunc Rostra, non eo loco quo nunc sunt, sed ad Comitium prope juncta Curiæ.*"

These *Rostra*, whether in their original position or as rebuilt by Cæsar, were *the Rostra par excellence*, although there were several other platforms or tribunals in and round the Forum. The only other *Rostra*, called the *Rostra Julia* to distinguish it, was the projecting *podium* of the *Heroon of Julius Cæsar*, built by Augustus, to which were affixed the beaks of the ships captured at Actium (see below).

The recent removal of the road which crossed the Forum, close by the Arch of Severus, has exposed the very interesting remains of the *Rostra* of Julius Cæsar, and has allowed the long disputed question of its form to be at length decided (see

Figs. 16 and 17). It is a long rectangular platform about 78 feet in length, and 11 feet high above the pavement of the Forum. Its end and side walls are of blocks of tufa, 2 Roman feet thick and 2 wide, but varying in length; each block was carefully fastened to the next with wooden dovetail dowels,

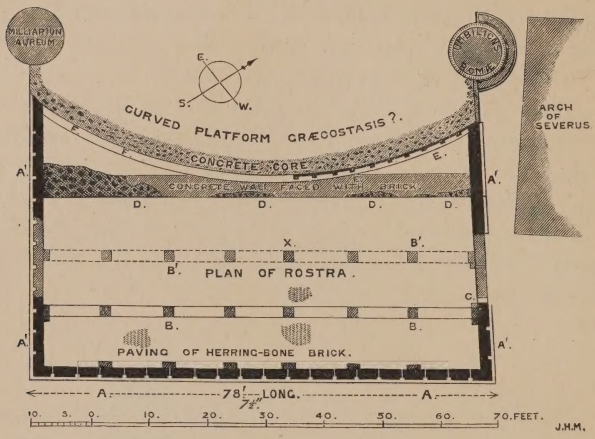

Fig. 16.

Plan of the Rostra and the curved platform behind it.

AA. Tufa wall with holes for rostra, and sinkings for the bronze pilasters.
A'A'. Tufa wall at the end with no holes for rostra.
BB. Travertine piers.
B'B'. Missing row of piers.
C. Probable position of the door.
DD. Existing remains of the brick and concrete wall.
EE. Marble slabs lining the front of the curved platform.
FF. Concrete core of the platform.
G. Umbilicus Romæ.
H. Milliarium Aureum.

all of which have decayed where they were exposed to the weather. A great part of this wall has been removed for building material, but at the south angle it is nearly perfect.

The upper floor or platform was supported on a series of

travertine piers, of which there appear originally to have been two rows; on the top of these piers travertine lintels were laid, both longitudinally and across, forming a series of framed squares on which large travertine slabs were laid, thus forming

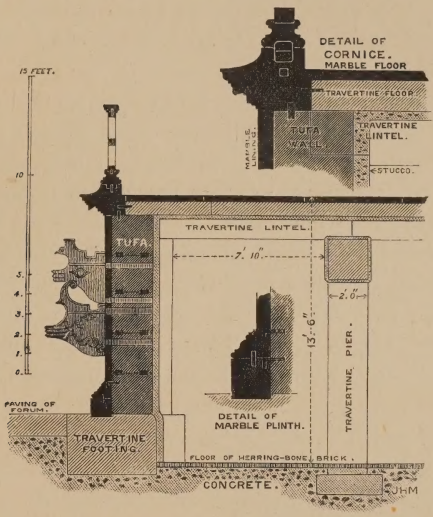

Fig. 17.

Section through front of Rostra, showing the marble lining, screen, and the bronze beaks, the position of which is shown by the holes in the existing tufa wall. The details are to double scale.

a level floor for the orators. Owing to the travertine piers being made of long blocks set on their ends, instead of on their "natural bed," most have given way through the stone splitting from end to end,[1] and at various periods in the third and fourth centuries the failing piers have been replaced or supported on each side by the addition of masses of brick-faced

[1] All stratified stone is stronger if laid in the same way as it was originally deposited, and travertine is especially weak when set on end, owing to its highly laminated structure.

concrete or arches under the stone lintels. Only one isolated pier now remains perfect, and has fragments of its lintels still on it, but the positions of the others can mostly be traced. Many more remain of the piers or pilasters which are set against the tufa wall. One reason probably of the failure of the travertine piers was the weight of the many statues with which the *Rostra* were crowded.

The back wall of the *Rostra* is of concrete, faced with brick and studded with iron nails, in the usual Roman fashion, to form a key for its stucco coating. This brick-facing is of especial interest, being the earliest example in Rome of known date (44 B.C); the whole of the under space of the *Rostra* was thickly covered with stucco, including the travertine piers and lintels. The under floor is of "herring-bone" brickwork, laid on concrete; it is 2 feet 6 inches below the level of the Forum paving, probably to give headway under the lintels which carried the upper platform. At the end towards the Arch of Severus there are traces of an entrance to the space under the platform of the *Rostra*. No remains exist of any stairs, and the upper floor was probably reached from the curved platform behind, supposed to be the *Græcostasis* (see below).

The whole outside of the *Rostra* was lined with marble, having a richly moulded plinth and cornice; none of the latter is *in situ*, but many large pieces lie scattered near the column of Phocas; its mouldings are very graceful in design and carefully worked (see section in fig. 17).

Along the top of the cornice runs a groove, with holes for metal fastenings, showing where marble *cancelli* or balustrades were fixed to prevent people being pushed off the platform. Part of one block is without this groove, showing that the screen was not continuous, but had a break in the middle, so that the figure of the orator, standing in the middle of the platform, would be visible from head to foot to the crowd below. Additional proof of this is given by a relief on the Arch of Constantine, which, though worthless as a work of art,

is of great antiquarian interest (see fig. 18). It represents these *Rostra* with a number of standing figures, and in the centre Constantine addressing the people. At the extreme ends are two colossal seated statues. The balustrade along the top of the platform is carefully shown, with its break in the centre. In the background appear, on the left of the spectator, some of the arches of the Basilica Julia, next the Arch of Tiberius; in the centre five columns with statues on them; and on the right the triple Arch of Severus.

A special point of interest in the remains of the *Rostra* is the existence of some holes and metal pins, sufficient to show the number and position of the bronze beaks of ships (*rostra*) which gave this platform its name. These are visible in the most complete part of the front wall at the south angle, and show that there were two tiers of *rostra*, 19 in the lower, 20 in the upper tier, arranged alternately.

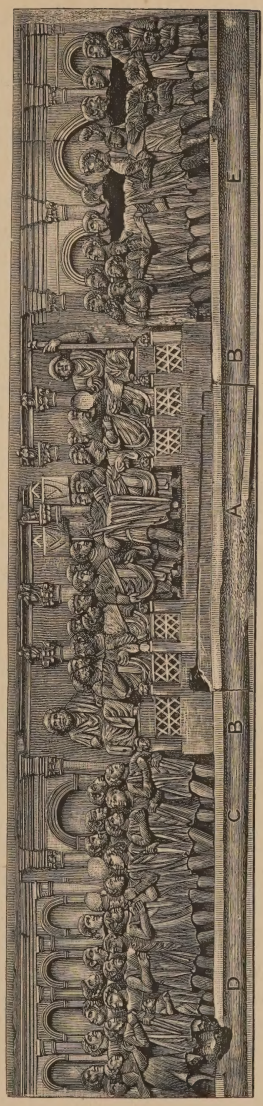

Fig. 18.
Relief showing—A. Constantine speaking from the Rostra. BB. Seated statues at each end of the Rostra. C. Arch of Tiberius. D. Basilica Julia. E. Arch of Severus.

The holes by which the beaks were fastened are about $2\frac{1}{2}$ inches in diameter, drilled through the whole thickness of the tufa wall, and even through the travertine piers, where one happened to come in the way; they of course also passed through the marble slabs which once lined the whole outside of the wall.

Where the lower tier of *rostra* were fixed there are also upright grooves (7 inches wide and 2 deep) sunk into the face of the tufa wall, probably made to hold bronze pilasters, which would appear at intervals along the marble facing. These upright grooves occur also on the end walls, though there are no holes for *rostra*.

An arrangement of upright pilasters, which is probably somewhat similar to that of the *Rostra*, still exists on the front of the curved platform behind.

Along the end of the rostra by the Arch of Severus a considerable length of the moulded plinth of white Pentelic marble still remains *in situ*, though the tufa wall to which it was fastened is here wholly missing.

The great care and accuracy with which the various parts of the marble lining were fixed is very remarkable, and a great variety of clamps, pins, and dowels, both bronze and iron, their ends run with lead, were used to fix each marble block to the adjacent ones, and also to the tufa wall behind. These can be well examined in the moulded plinth at the end and the sub-plinth in front; and the whole face of the now exposed tufa wall is studded with iron fastenings, especially in the upright grooves mentioned above.

The *rostra* fastened on the front of this platform are said to have been the original beaks of the ships from Antium, which Cæsar transferred (Florus, i. 11), together with some of the statues which stood in or near the ancient *Rostra;* among these were statues of Sulla and Pompey, together with two of Julius himself (Dion Cass. xlii. 18, and xliv. 4). Those of the ambassadors killed at Fidenæ possibly were destroyed

in the fire at the funeral of Clodius, as they do not seem to have been among those on the new *Rostra* of Julius Cæsar—"*Quorum statuæ in Rostris steterunt usque ad nostram memoriam*," as Cicero says, *Phil.* ix. 2. On the existing *Rostra* the bleeding body of Julius Cæsar was shown by Antony to the crowd which thronged the Forum; and on it Cicero's head and hands were fixed after his murder by Antony in 43 B.C.

Till the recent exposure of the remains of the *Rostra* it was usually thought that their form was curved or semicircular in plan, mainly on the evidence of a misunderstood reverse of a *denarius* of the *Gens Lollia*, with the legend PALIKANVS. It is more probable, however, that this coin represents a harbour with open arches, through which the beaks of ships at anchor are visible. In any case, even if *Rostra* are represented, it would be the original structure on the *Comitium*, not the existing one, as the coin is earlier than the end of Julius Cæsar's reign.

In addition to the late masses of brick and concrete which now obscure the remains of the *Rostra*, there is at one end, by the Arch of Severus, a prolongation of the platform of very late date, apparently of the fourth century. Part of the original moulded plinth of the *Rostra* has been rudely refixed along this late extension, probably taken from the end which was concealed by this concrete addition (see Forum plate).

Behind the Rostra, and coinciding with it in width, there are remains of a richly-decorated platform, curved in plan (see fig. 16). This is constructed of concrete made of tufa, pozzolana, and lime, with facing of Greek marbles, a great part of which still exists along about half its front. The moulded plinth is of Pentelic marble, and some of its blocks are incised with masons' marks, namely the Greek letters Γ, Δ, Ε, Z, H, Θ, and K. Above that are slabs of "Porta Santa" marble, with narrow pilasters of the same material at intervals of 3 feet. On the marble slabs are a number of metal pins, showing that they were decorated with metal *emblemata* or reliefs, probably of

gilt bronze.[1] Above this there was once an entablature, probably of white marble like the plinth; none of it now remains, though the travertine blocks on which the cornice rested still exist along a great part of the curve.

When the *Rostra* were complete it is evident that this richly-decorated front must have been wholly concealed; and this fact, together with many small points in the construction of the two structures, leaves little doubt that the *Rostra* were built subsequently to the curved platform, which, having perhaps been built by some party or individual hostile to Julius Cæsar, was disregarded and its beauty concealed when he built the existing *Rostra*.

The use of Greek marble shows that this platform can be but little earlier in date than the *Rostra* (44 B.C.); and it is the presence of this marble that has led Bunsen, Jordan, and others to pronounce it of late date, in spite of some known examples of the introduction of foreign marbles into Rome in the first half of the first century B.C.

The level of this platform appears to have coincided with that of the *Rostra*, and the top of the two structures probably formed one unbroken floor, the access to which was from the higher ground behind, against the slope of which the curved platform is set.

The position of the ancient *Græcostasis*, near the original *Rostra*, is mentioned above, and it is possible that this curved platform is the *Græcostasis* rebuilt on a second site, as is the case with the *Rostra* themselves.[2] The original *Græcostasis*

[1] The adornment of marble with metal decorations was a common practice among the Greeks, and largely followed by their Roman imitators. A notable example was the *zoophoros* or frieze of part of the *Erechtheum* in Athens; which is of dark Eleusinian marble, and had figures of gilt bronze attached to it; see Otto Jahn, *Pausaniæ descriptio Arcis Athenarum*, p. 51; Bonn, 1880.

[2] It must, however, be admitted that there is very little evidence to connect this curved platform with the *Græcostasis*.

is mentioned by Varro in the passage quoted, p. 148, and by Cicero (*Ad. Quint. fr.* ii. 1), who mentions the noise made on it by the partisans of Clodius to disturb the Senate in the *Curia*.

The later structure was restored by Antoninus Pius (see Capitolinus, *Ant. Pius*, cap. 8), and again by Diocletian (*Catal. Imp. Vien.*, printed by Preller, *Regionen*, p. 143), in both cases after injury by fire, a fact which seems to show that, at least in later times, it had some sort of *Porticus*, roofed over to protect those on the platform from sun or rain; but as the whole of its marble floor is missing there are no existing proofs of this.

The Umbilicus Romæ.—At the north end of the supposed *Græcostasis* there is a curious cylindrical structure in concrete faced with brick, and lined with thin slabs of marble, evidently of late date, probably of the third century; it is in three stages, each smaller than the one below. This is probably the *Umbilicus Romæ*, or central point of the city, known only from its mention in the catalogues of the *Notitia* and the *Einseidlen* MS. (see Preller, *Regionen*, Reg. viii. and Urlich, *Cod. Top. Rom.*)

The notion of marking a central point with a cylindrical object was probably suggested by the sacred *Omphalos* at Delphi, a conical stone covered with gold net-work.[1]

Another theory is that the cylinder on the "*Græcostasis*" was the base of a gilt bronze statue of the *Genius Populi Romani*, set up by Aurelian, but its form is quite unlike that of the pedestal of a statue.[2]

The Milliarium Aureum.—The corresponding position at the opposite end of the curved platform was probably occupied by

[1] This is shown on *tetradrachms* of the Seleucidæ, especially of Antiochus III., and with more detail on a fine painted vase of the 4th century B.C. See Jahn, *Vasenbilder*, Hamburg, 1839.

[2] This view is supported by Becker, *Handbuch*, i. p. 360, who maintains that the *Milliarium* and *Umbilicus* were identical in spite of their being separately catalogued in the *Notitia*.

a much earlier monument, the *Milliarium Aureum*, a gilt bronze column inscribed with the names and distances of the chief towns on the roads which radiated through the thirty-seven gates of Rome mentioned by Pliny, *Hist. Nat.* iii. 9.

It was erected by Augustus in 29 B.C., and its position is indicated by Tacitus (*Hist.* i. 27), who records that Otho and the Prætorian conspirators who killed Galba met "*ad Milliarium Aureum sub æde Saturni*" (see Plutarch, *Galba*, 24; and Schol. ad Suet. *Otho*, 6).

It is also mentioned in the *Notitia*, Reg. viii., as being by the *Vicus Jugarius*. Its position, as shown on the Forum plate, agrees with these indications, being near the start of the *Vicus Jugarius*, and close to the great flight of steps which led up to the *Temple of Saturn*. During excavations near this point, Canina found some marble fragments which probably belonged to the pedestal of this pillar. These consist of a curved moulded plinth, and frieze with floriated reliefs, and the base of a square pilaster, into which the curved part fits. The square base is now among a heap of fragments by the south end of the Rostra, and the curved fragments have recently been placed in their (supposed) original position.[1]

The *Temple of Saturn* occupies the site of the prehistoric *Altar to Saturn*, mentioned above. It is clearly identified from the description of its position in the *Monumentum Ancyranum* (see below, p. 170), and various passages in classical writings; and, moreover, it is shown on the *marble plan* (see Forum plate).

Varro (*Lin. Lat.* v. 42) speaks of it as being "*in faucibus Capitolii*"; and Servius[2] (*Ad. Æn.* ii. 115) says that it is in front

[1] For detailed and illustrated accounts of the *Rostra* and the adjacent monuments see Jordan and Fabricius in *Ann. Inst.* for 1883, with plates in *Mon. Inst.*; Nichols, *Gli Avanzi dei Rostri*, etc., 1885; and a paper by the author in *Archæologia* (*Soc. Ant. Lon.*), read November 1884.

[2] *Servius* is a name used to include many unknown early commentators on Virgil; an excellent edition is being brought out by Thilo and Hagen, Leipsic, 1881–5.

of the *Clivus Capitolinus*, and near the *Temple of Concord*. The Forum plate shows the manner in which the *Clivus Capitolinus* winds round it on its way up from the *Forum* to the *Capitolium*, on the lower outlying slope of which the temple is set. Its site is accurately described by Dionysius (i. 34)—*παρὰ τῇ ῥίζῃ τοῦ λόφου, κατὰ τὴν ἄνοδον τὴν ἐις τὸ Καπιτώλιον φέρουσαν ἀπὸ τῆς ἀγορᾶς*. This temple was one of especial importance, as it appears to have contained the chief public treasury—"*Templum Saturni in quo et ærarium fuerat*," Servius, *Ad. Æn.* ii. 116; and Macrobius, *Saturn.* i. 8, "*ædem vero Saturni ærarium Romani esse voluerunt.*" These passages show clearly that the *Ærarium Saturni* was part of the temple, and not in the so-called *Tabularium*, as some archæologists have asserted.

This treasury was presided over by *Quæstores* or *Præfecti*, with many subordinate officials; Suet. *Claud.* 24; and Tac. *Ann.* xiii. 28–9. In several inscriptions these officials are mentioned; on the ground-floor of the Capitoline Museum is preserved a small marble pedestal of a statue of the elder Faustina, dedicated by a *viator* (a messenger) of a *Quæstor ærarii Saturni*;[1] see also Gudius, *Ant. Inscrip.* p. 125, and two inscriptions in the Vatican Museum.

According to Varro (ap. Macrob. *Saturn.* i. 8) the original *Temple of Saturn* was founded by the last Tarquin, and dedicated by T. Lartius, the first dictator, in 501 B.C.; but Livy (ii. 21), and Dionysius (vi. 1) attribute it to the consulship of A. Sempronius and M. Minucius, three years later. In the reign of Augustus it was rebuilt on an enlarged scale by Munatius Plancus. The only portion remaining of this date is part of the very lofty *podium* which towers above the *Vicus Jugarius*, built of massive blocks of travertine, and part of the lowest course of the facing of Pentelic marble with which the whole was once lined. It is interesting to note remains of a small marble staircase which apparently led from the end

[1] This was the inscription which was found in the *ædicula*, between the Temples of Vespasian and Concord (see p. 215).

of the *Sacra Via* into a chamber formed in the massive concrete substructure of the great flight of steps in front of the temple. The start of this little side entrance, with much worn steps of white marble, rests on massive blocks of travertine. The chamber thus formed under the main staircase may have been used to store money or valuables, like the similar little room in the *podium* of the Temple of Castor, and elsewhere. At one side of this little staircase there is a large block of travertine projecting from the *podium* of the temple, and in it are large holes for metal fastenings, showing that on it once rested a statue or column, by the side of the steps into the little chamber.

In the sixteenth century a fragment of the frieze was found dating from the rebuilding of the temple in the time of Augustus, it was inscribed L·PLANCVS·L·F·COS·IMPER·ITER·DE·MANIB. . . . (*Cor. In. Lat.* vi. 1316). This important fragment is now lost. The upper part of the temple now existing, with the eight columns, and clumsily patched entablature, belong to the last rebuilding by Diocletian after a fire. The columns, which are of gray and red Egyptian granite, are probably older than this, but were hurriedly reset in a very careless way, some being upside-down. On the existing rude entablature is part of the inscription which recorded the restoration of Diocletian, once inlaid with bronze letters. . . . SENATVS·POPVLVS·QVE·ROMANVS·INCENDIO·CONSVMPTVM·RESTITVIT.

Adjoining or near to the *Temple of Saturn* was another treasury, the *Temple of Ops*, in which were stored the 700 million sesterces left by Julius Cæsar at his death (Cic. *Phil.* ii. 37).

Livy (xxvii. 10) mentions another treasury called the *Ærarium Sanctius*, in which a reserve store of gold was kept for special emergencies; the hollow throne of *Jupiter Capitolinus* was for long used as a similar hiding-place for gold.

The Vicus Jugarius (see plate of Forum) started from the end

of the *Sacra Via*, and passed between the *Temple of Saturn* and the *Basilica Julia* towards the *Capitolium* and *Tarpeian Rock*, which overhung this road, so that on one occasion, in 192 B.C., a fall of tufa rock from the cliff of the Capitolium killed several persons walking in the *Vicus Jugarius;* Livy, xxxv. 21.

Thence the road passed on to the *Porta Carmentalis* in the Servian wall; by it stood an ancient altar to *Juno Juga* the patroness of marriage, from which its name was derived. Near the commencement of the *Vicus Jugarius* there are remains of a brick and concrete arch or gateway, once faced with marble (see plate); it is not earlier than the fourth century, and was built abutting on one side against the marble-lined *podium* of the *Temple of Saturn*, while the other pier of this arch was set against one of the marble piers of the *Basilica Julia*, a perfect print of which still exists in the concrete of the gate, though the marble pier itself has disappeared.

Near this point but across the adjacent *Sacra Via* was probably the position of the *Arch of Tiberius.* The Forum plate shows how the *Sacra Via* is contracted at this end, very possibly to bring it within the single opening of Tiberius's Arch. Tacitus (*Ann.* ii. 41) describes it as being "*propter ædem Saturni*," and records that it was erected in 17 A.D. in honour of Tiberius, on account of the re-capture by Germanicus of the standards lost by Varus in Germany. Several fragments of this arch made of Greek marble were found by Canina near the supposed site, and according to him traces of its travertine foundations were also discovered, but these are now difficult to trace. One fragment, a *voussoir* of the arch, now lies near the column of Phocas; a piece of the *attic*, with fragmentary inscription, is now in the *Sacra Via*, opposite the *Basilica Julia*, and another is on the platform of the *Porticus Deorum Consentium;* both have deeply sunk matrices for bronze letters.

The *Basilica Julia.* Next in order of position comes the great *Basilica Julia* (see plate), bounded on the north-east

side by the *Sacra Via*, on the north-west end by the *Vicus Jugarius*, and on the south-east by the *Vicus Tuscus*. As mentioned above, this site was partly occupied in early times by the row of shops first built by Tarquinius Priscus; and according to some archæologists by the first Roman Basilica called *Sempronia*, but this latter probably stood farther away from the Forum towards the *Velabrum*.[1]

The early history of the *Basilica Julia* is concisely given in a very important passage of the *Monumentum Ancyranum*, or Ancyræan copy of the epitaph of Augustus, who is supposed to say—FORVM · IVLIVM · ET · BASILICAM · QVAE · FVIT INTER · AEDEM · CASTORIS · ET · AEDEM · SATVRNI · COEPTA · PROFLIGATAQVE · OPERA · A · PATRE · MEO · PERFECI · ET · EANDEM · BASILICAM · CONSVMPTAM · INCENDIO · AMPLIATO · EIVS · SOLO · SVB . TITVLO · NOMINIS · FILIORVM · INCOHAVI · ET · SI · VIVVS · NON · PERFECISSEM · PERFICI · AB · HAEREDIBVS [MEIS · IVSSI]. See also Suet. *Aug.* 29. According to these accounts the *Basilica* was begun by Julius Cæsar, and completed by Augustus, who named it Julia after his adoptive father; it was soon after destroyed by fire, and rebuilt by Augustus on an enlarged scale in honour of his grandsons Caius and Lucius (the "filii" of the above inscription). See Dion Cass. lvi. 27.

The *Basilica Julia* was one of the many buildings which were restored by Severus: an inscription found near it records that this was done in 199 A.D., after a fire. It was again burnt in 282 A.D., and restored by Diocletian; and a final restoration is recorded on an inscribed pedestal which now stands in the exposed part of the *Vicus Jugarius*, at the end of the Basilica; this last restoration was the work of Gabinius Vettius Probianus, Præfect of the city in 377, A.D.

[1] The *Basilica Sempronia* was near the *Statue of Vortumnus*, see below, and the inscribed pedestal of this statue was found in the sixteenth century by the *Vicus Tuscus*, not far from the Church of S. Teodoro.

During the Middle Ages this enormous building was treated as a marble quarry, and almost wholly removed for building-material or burnt into lime on the spot. During the excavations of Canina three limekilns were found within the area of this one building, a fact which explains why so very little remains of this once massive and lofty *Basilica.*[1]

In plan the *Basilica Julia* was a large double *Porticus,*[2] with two tiers of columns one over the other; open on three sides, and having a range of rooms two or three stories high on the south-west side—that away from the Forum. Some very interesting remains of these rooms, and traces of the staircase, still exist, and are partially excavated near the west corner. These are built of tufa, with bands of travertine at intervals, and travertine pilasters at the end of each division wall. This part possibly dates from the time of Julius Cæsar. Augustus appears to have rebuilt the main building, with arches and engaged columns of Luna marble, two stories in height, the lower order being Tuscan in style. Part of two of these piers have recently been exposed by the side of the *Vicus Jugarius;* they are built of massive blocks of marble, carefully jointed, and once covered with a thin coat of *opus albarium* or fine stucco, to receive coloured decoration. The lower part of one of these piers is well preserved. The double aisle, which surrounded three sides, was vaulted in concrete, forming an upper floor, from which the public listened to the trials which were being conducted in the area below (see Pliny, *Ep.* vi. 33), where four separate tribunals of the *Centumviri* were held,

[1] It has unhappily been much falsified by needless restoration; nearly all the brick piers are quite modern, and the one that has been restored in stone has been shown, by recent discoveries, to be unlike the ancient design.

[2] It should be noted that the word *Porticus* has a meaning quite different to that of the English word *Portico. Porticus* usually means a building with its roof supported by one or more rows of columns; either in one straight line or enclosing a space like a cloister.

including as many as 180 *Judices* or jurors. It was here that the younger Pliny practised as an advocate, and the Emperor Trajan held courts of justice (Dion Cass. lxxxviii. 10). One of the late reliefs on Constantine's arch shows this or a similar *Basilica*, with its upper galleries (*mœniana*) crowded with people, who appear to be sheltered from the sun by curtains hung in the open arches. The large central space appears to have been without a roof, as the span is too great to admit of one; over this an awning was probably stretched, as was sometimes the case with the whole central area of the Forum. Low marble screens or *cancelli* shut in the otherwise open arches on the ground-floor: a great number of fragments of these screens are scattered about the Forum, and the sub-plinth of one remains *in situ*, near the existing marble pier at the north-west end. The space under the double aisles is paved with massive slabs of white marble; and the central area had a very rich pavement of Oriental coloured marbles, namely, *Pavonazetto*, *Cipollino*, *Giallo Antico*, and *Africano*, arranged in concentric squares. On the white marble paving many *tabulæ lusoriæ* or gaming tables are incised: a few have inscriptions cut near them, with allusions to their use, *e.g.* VINCES · GAVDES · PERDES · PLANGIS. The dice-players of the Forum are mentioned by Cicero (*Phil.* ii. 23), "*Hominem nequissimum qui non dubitaret vel in Foro alea ludere.*"

Suetonius (*Cal.* 37) mentions that it was one of Caligula's amusements to throw money from the roof of the *Basilica Julia* among the crowd in the Forum below: the summit of this building was probably a link in the bridge by which this madman united the Palatine palace to the *Temple of Jupiter* on the *Capitolium*. The *Temple of Augustus* is mentioned by Suetonius (*Cal.* 22) as forming part of this bridge—"*Super Templum Divi Augusti, ponte transmisso, Palatium Capitoliumque conjunxit*"; and this is very strong evidence to show that the large brick and concrete structure, once lined with marble, which stands at the foot of the Palatine (see plate), is the *Temple of*

Augustus,[1] about the site of which so many theories have been invented. The start of Caligula's bridge possibly exists in the upper part of the palace (see p. 111), and in its course towards the *Capitolium* it must have passed over this stately building. Thence there was probably a wooden bridge to the roof of the *Basilica Julia*, and then a second wooden erection to bridge over the space from the *Basilica* to the *Temple of Jupiter Capitolinus*. No traces remain of these intermediate steps, which were probably removed at the death of the insane emperor.

The Vicus Tuscus, starts from the *Sacra Via*, passing between the end of the *Basilica Julia* and the *Temple of Castor*, and so on through the *Velabrum* to the *Circus Maximus*. At many points along this line its basalt paving has been exposed at various times; only the piece by the Forum is now visible. According to the legend it was called the *Vicus Tuscus*, or "Etruscan road," from the soldiers of the Etruscan chief Cælius Vibennus, the ally of Romulus, who settled in the quarter through which this street was made. The suspicions of the Romans caused them to be transferred to this site from their original and more commanding settlement on the Cælian Hill, the name of which was said to be derived from their chief Cælius: See Varro, *Lin. Lat.* v. 46; Liv. xxvii. 37; and Tac. *Ann.* iv. 65.

A very ancient statue of Vortumnus, one of the chief Etruscan deities, stood near the commencement of the *Vicus Tuscus*, a little to the south-west of the Basilica, where its pedestal (restored by Diocletian) was found in 1549; the part of its inscription then discovered was VORTVMNVS · TEMPORIBVS · DIOCLETIANI · ET · MAXIMIANI . . . (*Cor. I. L.* vi. 804.) This interesting pedestal is now lost, but a drawing of it, with MS. note by Ligorio, exists in *Cod. Vat.* 3439, fol. 46. Propertius (*Eleg.* IV. ii.) gives an interesting account of Vortumnus, and (l. 50) mentions the derivation of

[1] The *Temple of Augustus* was begun by Tiberius, and finished by Caligula; Suet. *Cal.* 21.

the name *Vicus Tuscus;* see also Pseudo-Ascon. ad Cic. *Verr.* II. i. 59.

In later times a number of sellers of *thus*, perfume, and incense, lived in this street, which was sometimes named after them, *Vicus Thurarius:* Hor. *Sat.* II. iii. 228, and *Epis.* ii. 269. The shameful neglect of the repairs of this important street, much used by religious processions, is one of the charges brought by Cicero (*Verr.* II. i. 59) against Verres, whose duty it had been as ædile to keep it in good order.

The Temple of Castor, on the south-east side of the *Vicus Tuscus*, is clearly identified by the *marble plan*, see plate; and its position is indicated by the passage in the *Ancyræan inscription* quoted above (p. 170). The Temple was originally founded to commemorate the apparition in the Forum of the twin brothers, Castor and Pollux,[1] who announced the victory of the Dictator Aulus Postumus at Lake Regillus, in 496 B.C., and watered their horses at the *Fons Juturnæ*, close by the site of the Temple. The Temple was dedicated in 482 B.C. by the son of the victorius dictator, who was created *duumvir* for that special purpose, Liv. ii. 20 and 42; Dionys. vi. 13; Plut. *Coriol.* 3; Ov. *Fast.* i. 707.

Lake Regillus is now dried up, but traces of it are believed to exist in the plain between Gabii and the modern village of Colonna, about 13 miles from Rome.

In 119 B.C. the *Temple of Castor* was restored by the consul, L. Metellus Dalmaticus (Ascon. ad. Cic. *Pro Scaur.* 46); and, in the reign of Augustus, 6 A.D., it was rebuilt by Tiberius and Drusus out of the spoils taken in Germany (Suet. *Tib.* 20; Dion Cass. lv. 8, 27); to which period belong the three existing Corinthian columns and rich entablature of Greek marble, very graceful in design, and of the most perfect workmanship, perhaps the most beautiful architectural fragment in Rome. The design is almost pure Greek in style and detail, but one con-

[1] Though dedicated jointly to both brothers, the temple was usually called after Castor only: Suet. *J. Cæs.* 10.

structional peculiarity shows the Roman timidity in the use of the flat marble lintel: the frieze is jointed so as to form a flat arch, throwing its weight, and that of the cornice, directly on to the columns—a needless precaution.

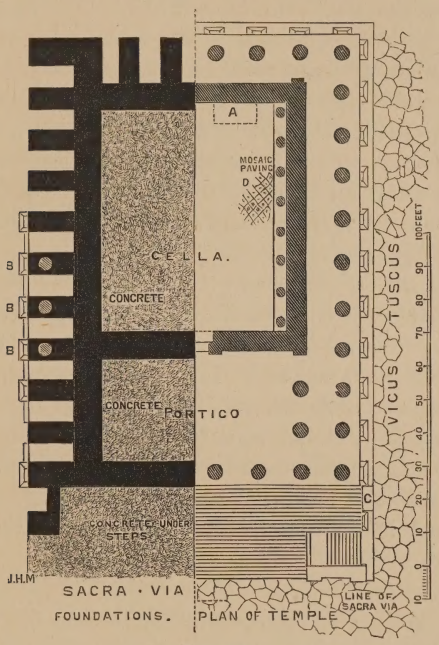

Fig. 19.

Plan of the Temple of Castor, showing construction of podium.

A. Pedestal of one of the two statues.
BBB. Spurs of foundation wall, of travertine and tufa, under the three existing columns.
C. Steps to small chamber in the concrete core of the podium.
D. Existing bit of mosaic paving of earlier building.

The Temple was *hexastyle*, with only eleven columns on the sides; see plate and fig. 19. It stands on a lofty *podium*, about 22 feet high, which was wholly lined with Pentelic

marble, having a richly moulded cornice, and wide flat pilasters with moulded bases, one below each column of the *peristyle*. Parts of these, which still exist below the three standing columns, are now exposed to sight, and bases of others exist on the opposite side in the *Vicus Tuscus*. In front was a wide flight of marble steps down to the ancient line of the *Sacra Via*, and there were also small stairs on each side.

By the side stair in the *Vicus Tuscus* there was a door, the worn marble sill of which still exists, leading into a small chamber formed in the concrete core of the *podium*, probably one of those strong rooms for storing plate and money, which existed in many Roman Temples;[1] the one in this temple is alluded to by Juvenal (*Sat.* xiv. 260).

Within the *Cella* fragments of a mosaic floor exist, evidently earlier in date than the rebuilding of 6 A.D., as is shown by the level of this mosaic being considerably below the marble bases of Tiberius's columns. It is a simple lozenge pattern, made of white marble and gray lava, and has all the characteristics of late Republican mosaic, having *tesseræ* smaller and more neatly fitted than was usual in the mosaic of Imperial times. Similar mosaics of about the same date exist in the Regia (see p. 188), and in the so-called House of Livia on the Palatine, see p. 103.

The construction of the *podium* of this Temple is a very interesting example of the wonderful care and solidity with which Roman Temples of the best period were constructed (see fig. 19).[2] Solid walls, 8 feet thick, of enormous blocks of the hardest tufa, each carefully clamped to the adjacent blocks, are built under all the walls of the *cella*, forming a sort of box with sides 22 feet high; the whole interior of which, with the

[1] As for example in the Temples of Concord, Saturn, and that of Divus Julius.

[2] Part of the very interesting foundation walls of the temple have lately been concealed and falsified by the most needless and senseless restoration of the substructure under one of the missing columns.

exception of the small chamber above mentioned, was filled in solid with a dense mass of concrete, which set into one block like one immense stone. From these tufa walls other massive spur walls project at right angles, and on the ends of these the columns of the *peristyle* were set. The spur walls are of tufa, except the part immediately under each column, which is of travertine, the harder stone being used at the points of greatest pressure.

These spur walls were also strengthened laterally by flat travertine arches, spanning the intercolumniations from wall to wall just below the columns.

The whole result of this elaborate and massive construction is an amount of strength far in excess of what was actually required, showing the most lavish expenditure of both labour and material.

Cicero (*Verr.* II. i. 49 *seq.*) tells an interesting story of how Verres extorted money out of a pretended restoration of the Temple of Castor. He mentions that the columns were *dealbatæ*—that is, covered with the hard white stucco made of pounded marble (*Opus albarium*), which was usually applied as a ground for coloured decorations. The building referred to is of course the earlier one, which existed before the rebuilding by Tiberius and Drusus. The columns of this were probably not of marble but *peperino*, which appears to have been always coated with stucco.

The Temple of Castor was occasionally used as a meeting-place for the senate (Cic. *sup. cit.*), and its lofty podium was used, like the *Rostra*, as a tribunal for orators (Plut. *Sulla*, 8; Cic. *Pro Sext.* 15). It was the scene of many fierce political struggles, and even riots, especially in the time of Marius and Sulla, and when Julius Cæsar, during his joint-consulship with Bibulus, advocated his Agrarian law (Dion Cass. xxxviii. 6). Again, shortly after, when the recall of Cicero from exile was proposed, Clodius and his party fortified themselves in the Temple, and broke up the steps to render access difficult: Cic. *In Pis.* 5.

A door was broken in the back wall of the *Cella*, behind the statues of Castor and Pollux, by the insane Caligula, who connected the temple with his new palace at the north angle of the Palatine, and used to offer himself for worship, standing between the twins: Suet. *Cal.* 22.

Near the *Temple of Castor* was another *Tribunal* for orations, probably only a wooden *suggestum*, called the *Tribunal Aurelium:* Cic. *In Pis.* 5, and *Pro Sext.* 15.[1]

The *Fons Juturnæ* existed in some form till Imperial times (Ov. *Fast.* i. 705, and Dionys. vi. 13), probably as a marble fountain or tank. Remains of a circular travertine structure near the Temple of Castor (see Forum plate) have been supposed to belong to this; but their form — a sort of curb, with a channel for rain-water — makes it more probable that they belonged to the *Puteal Scribonis* or *Libonis* (Hor. *Ep.* i. 19, 8, and *Sat.* ii. 6, 35), a circular marble structure like a well-mouth, used to protect some spot where lightning had fallen, or where some sacred object was buried.[2] The *Puteal Scribonis* is shown on a *denarius* of the *Gens Scribonia*, ornamented with reliefs of lyres and hanging garlands.

Near the side of the Sacra Via, opposite the Temple of Castor, stand the scanty remains of the Heroon or Temple of the deified Julius Cæsar, built by Augustus in 42 B.C., as recorded in the Ancyræan inscription—AEDEM · DIVI · IVLI . . . FECI. Dion Cassius (xlvii. 18), says that this Heroon was built on the spot where Cæsar's body was burnt. Ovid (*Ep. ex Ponto*, II. ii. 85) mentions it as being near the Temple

[1] This, or a similar Tribunal, is shown on a bronze medal of Nero, with the legend—CONGiarium II. DATum POPulo Romano. Froehner, *Médaillons de l'Empire*, p. 14, Paris, 1878.

[2] Another *puteal* (by the *Comitium*) enshrined the spot where the miraculous razor and whetstone of the augur Attus Navius were buried, Livy, i. 36; and Cic. *De Divin.* i. 17. It clearly was distinct from the *Puteal Scribonis*.

of Castor, and (*Metam.* xv. 841) facing towards the Forum and the Capitol. Further indications of its site are given by Statius (*Silv.* i. 22-66) in his description of the buildings near the statue of Domitian, so that no doubt whatever exists as to its identification.

Before the Temple was built a column of Numidian marble, 20 feet high, inscribed PARENTI · PATRIAE, was set by the senate on the site of Cæsar's funeral pyre (Suet. *J. Cæs.* 85); according to Appian (*Bell. Civ.* ii. 148) an altar was also dedicated to Julius on this spot.

Though only the concrete core of the *Podium* and a few marble fragments now exist, yet the plan of the Temple can be fairly well made out, mainly from the voids in the concrete, which show the position of the massive tufa walls in the *podium*, built as substructures to support the marble columns and walls of the upper Temple. These were arranged on a similar system to that of the *Temple of Castor*, except that there were no projecting spur-walls, as this Temple had no *peristyle*. Prints of the great blocks are visible on the face of the concrete core, but all the stone itself has been removed for building material.

The plan of this Temple is quite unique; it consisted of two parts—first a platform which projected at a lower level in front of the Temple, and was approached by two stairs.

The central part of the front of this *suggestum* or platform, once wholly lined with marble, is hollowed into a semi-circular recess; this is now filled up with late concrete and masonry, probably of the third or fourth century; its original form is shown on the Forum plate. To some part of this front were affixed the bronze beaks of the ships taken by Augustus at Actium, Dion Cass. li. 19; and hence this podium was known as the *Rostra Julia*, being so called to distinguish it from the original or *Rostra vetera*.

It appears probable that this very unusual form for the *suggestum* was adopted in order that the apsidal recess might

inclose the pre-existing column or altar, in which case the orator probably stood on one side of the recess.

Suetonius (*Aug.* 100) mentions that funeral orations in honour of Augustus were delivered both from the *Rostra Julia* and the ancient *Rostra*—"*Bifariam laudatus est, pro æde Divi Julii a Tiberio, et pro rostris veteribus a Druso;*" see also Dion Cass. liv. 35.

Bronze coins of Augustus and Hadrian have representations of this building. On a second Brass of the former Emperor the *podium* with the bronze *Rostra* fixed to it is shown, and on it Hadrian addressing people standing below.

The Temple of Julius Cæsar itself is raised considerably higher than the platform in front of it, from which it was reached by steps up to the prostyle portico. It was probably a Corinthian *prostyle hexastyle* building—that is, having a portico at one end, with six columns in front, and no free columns at the back and sides; according to Vitruvius, iii. 2, it was *pycknostyle*, having, that is, the columns closely set together. The cella appears to have been very small and shallow. Fragments exist on and near the Temple of the main cornice, including pieces of the horizontal part along the sides and the sloping part of the pediment in front.

Only one bit remains of the cella floor, paved with simple marble mosaic. A long piece of marble step, on the side towards the *Temple of Castor*, marks the old extent of the *podium*, and the start of one of the front stairs, with worn step, is still *in situ*.

The rudely-worked plinth moulding against the late masonry, which now fills up the apsidal recess, was probably copied from the plinth of the original part, none of which now remains.

The appearance of this Temple, first with its lofty *podium*, and then the Temple proper rising high above that, must have been very strange. Several allusions to its abnormal height occur in classical writings, *e.g.* Ovid, *Ep. ex. Pon.* II. ii. 85—

"*Fratribus*[1] *assimiles,*[2] *quos, proxima templa tenentes,*
Divus ab excelsa Julius æde videt."

The Temple of Vesta, of which remains exist at the southern angle of the Forum, was the most sacred of all the shrines of Rome. The ever-burning fire which it contained, symbolising the family *hearth* (*Ἑστία*), or centre of home life, was probably derived from some long-forgotten prehistoric period when the use of flint and steel was unknown, and fire could only be kindled by the slow and laborious process of rubbing one piece of wood against another. During this primitive time a village would naturally guard against the misfortune of finding itself without fire by combining to keep up and watch in some sheltered hut an ever-burning fire, from which the villagers might at any time relight their extinguished embers. This hut would for general convenience be set in the centre of the village, and would soon acquire a sacred character, and develop into the most important feature of a religious cult. To watch this fire would naturally be the duty of women, especially of those who were not burdened with the cares of maternity; and hence may have arisen the virgin priestesses, whose most important duty it was to feed the sacred fire. A survival of this prehistoric custom appears to have existed in the rule which enacted that, if the sacred fire ever did go out, it was to be rekindled by the primitive method of friction, and the negligent Vestal was to be punished by scourging. In later times the much easier method of relighting by a burning glass was permitted. In either case the rekindling was done by the Pontifex Maximus.

According to tradition the *Temple of Vesta* was founded by Numa, who transferred the centre of this cult from Alba Longa to Rome, together with the four Vestal virgins, its priestesses; Plut. *Num.* 10, and Dionys. ii. 65.

One of the later kings, Tarquinius Priscus or Servius

[1] Castor and Pollux.

[2] Germanicus and Drusus are alluded to.

Tullius, increased the number of the Vestals to six. They were elected at the age of between six and ten, and took vows for thirty years, at the expiration of which the Vestal was free to leave the priesthood and marry; which, however, was rarely done.

In return for their arduous duties the Vestals had a number of special privileges, and lived in a style of great luxury; the penalty for a breach of chastity was the horrible one of being buried alive at a place near the Colline Gate, known as the Campus Sceleratus; see Dionys. x. 40; and Pliny (*Epis.* iv. 11), who gives a most vivid and pathetic account of a Vestal who was treated in this way by order of Domitian, on bare suspicion and without a fair trial. Her supposed lover was scourged to death on the *Comitium*.

In addition to the sacred fire, the Vestals had under their charge some of the relics, on the preservation of which the welfare and even existence of the Roman State was supposed to depend—"*fatale pignus Romani Imperii*," Liv. xxvi. 27.[1]

One of these was the *Palladium* saved by Æneas from the burning Troy: see Lucan, *Pharsal.* ix. 992. It appears probable that these relics were preserved, not in the *Temple*, but in the *Atrium Vestæ* or House of the Vestals. (See below, p. 188.)

The shrine of Vesta, *Ἑστία*, the personification of the Hearth, was not a *Templum* in the strict sense of the word: not, that is, a building inaugurated so that it could not be used for meetings of the Senate, but was an *Ædes Sacra:* Servius, *Ad. Æn.* vii. 153; and Aul. Gel. xiv. 7.

The circular form of the shrine symbolised the round earth, and its dome or *tholus* the canopy of heaven. The fire-altar occupied the place of a statue of the goddess.[2]

The original Temple was destroyed by the Gauls in 390 B.C., when the Vestals escaped to Cære in a waggon, having first buried the *fatale pignus* in a clay vessel or *dolium* in the

[1] The whole number of these sacred objects was seven, see p. 228, note.

[2] "Effigiem nullam Vesta nec ignis habet."—Ov. *Fast.* vi. 298.

Forum, a spot which afterwards became sacred under the name *doliola:* Liv. v. 40.

The Temple was burnt again in 241 B.C., when the Pontifex Maximus Metellus saved the sacred relics from the flames at the expense of his own eyesight: Dionys. ii. 66.

The Temple was again burnt in the great fire of Nero's reign: Tac. *Ann.* xv. 39–41, and Suet. *Nero*, 38; and lastly in the time of Commodus: Herodian, i. 14; after which it was rebuilt by Severus, to which period the existing marble fragments belong.

In the time of the elder Pliny its dome was remarkable for its tiles of Syracusan bronze (*Hist. Nat.* xxxiv. 7).

The Temple of Vesta is shown on bronze medallions of Faustina the elder, Lucilla, Crispina, and Julia Domna; see Frœhner, *Médaillons de l'empire Romain*, Paris, 1878, pp. 76, 96, 148, and 159; and also on a marble relief now in the Uffizi at Florence. These, with the help of the existing concrete *podium*, and marble fragments of columns, entablature, and *lacunaria*, enable a fairly accurate restoration of the Temple to be made (see fig. 20). It closely resembles the round temple in the *Forum Boarium* by the Tiber,[1] which used formerly to be mistaken for the *Temple of Vesta*, on account of Horace's lines, *Od.* I. ii. 13—

> "*Vidimus flavum Tiberim retortis*
> *Littore Etrusco violenter undis*
> *Ire dejectum monumenta regis*
> *Templaque Vestæ.*"

The great flood of 1877 showed, however, that even now

[1] During the fifteenth and sixteenth centuries the *Forum Magnum* was often confused with the *Forum Boarium;* partly perhaps from its mediæval name, the *Campo Vaccino*, which was taken to be a translation of *Forum Boarium.* The so-called *Tomb of S. Luke* at Ephesus, a Roman temple of about the time of Severus, was almost an exact copy of the Temple of Vesta; only scanty remains of it now exist.

the waters of the Tiber could reach to this point in the Forum. Martial, Ep. i. 71, 3, clearly describes this site

> "*Quæris iter? Dicam. Vicinum Castora cane*
> *Transibis Vestæ, virgineamque domum.*"

The "*virginea domus*" is the House of the Vestals, or *Atrium Vestæ*.

The existing architectural fragments are of poor workmanship, like all the buildings which are as late as Severus's reign.

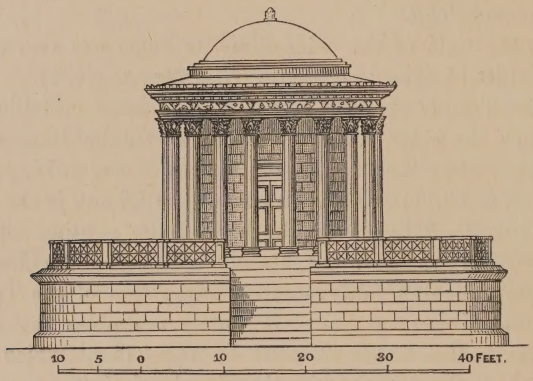

Fig. 20.

Temple of Vesta, as rebuilt by Severus, conjecturally restored by Comm. Lanciani from existing remains.

The ruined *podium* of concrete made of broken tufa, with some blocks of tufa embedded in it, and the foundations of the steps, are much earlier in date; the latter may possibly belong to the original temple.

As rebuilt by Severus it consisted of a circular *cella*, with *peristyle* of eighteen columns, on a *podium* about 10 feet high. The spaces between the columns were filled in with metal screens, which fitted on to a projection on each side of the columns, as can be seen on the existing fragments; this screen is also shown on the medals and relief mentioned above.

CHAPTER VI.

THE FORUM MAGNUM AND ITS ADJACENT BUILDINGS (*continued*).

THE Pontifex Maximus, in his quality of paternal guardian of the Vestals, lived in a house adjoining theirs, and near the Temple of Vesta; its position is recorded by Servius, *Ad Æn.* viii. 363, as being "*in radicibus Palatii finibusque Romani Fori*," "at the foot of the Palatine and on the extreme edge of the Forum." The excavation of the remains of this house has been one of the most interesting discoveries of recent years.

The original *Regia*, like the *Temple of Vesta*, was said to have been built by Numa,[1] and used as his dwelling-house; and thenceforth it became the official residence of the chief Pontiff. It also was destroyed by the Gauls in 390 B.C., and was again burned in 210 B.C., when the Temple of Vesta narrowly escaped (Liv. xxvi. 27). This was the house of Julius Cæsar, from the date of his election to the office of Pontifex Maximus, and was the scene of Clodius's celebrated intrigue with Cæsar's wife; Suet. *J. Cæs.* 46; Cic. *Ad Att.* x. 3; and Plut. *Cæs.* 10.

When Augustus became Pontifex Maximus in 12 B.C. he preferred to live in his house on the Palatine, and he presented the *Regia* to the Vestals because it adjoined their house—τὴν

[1] "Hæc est a sacris quæ via nomen habet,
Hic locus est Vestæ qui Pallada servat et ignem,
Hic fuit antiqui Regia parva Numæ."—Ovid, *Trist.* III. i. 28.
In another place Ovid (*Fast.* vi. 263) speaks of the "Regia *magna* Numæ," showing that Roman poets are no safe guide as to archæological details.

μέντοι τοῦ βασιλέως τῶν ἱερῶν (οἰκίαν) ταῖς ἀειπαρθέναις ἔδωκην, ἐπειδὴ ὁμότοιχος ταῖς οικήσεσιν αὐτῶν ἦν; Dion Cass. lvi. 27.

The Vestal virgins appear then or soon after to have pulled down the *Regia*, and rebuilt their house on an enlarged scale, partly covering the site of the *Regia;* thus the lower part of some of its walls and columns, and some of its mosaic pavings have been preserved, owing to the fact that the house of the Vestals was built over it with floors at a rather higher level, thus covering and protecting the mosaics and other relics of the more ancient *Regia.* The very interesting existing remains of the *Regia* are shown on fig. 21; it will be seen that it is set at quite a different angle from the later buildings around it; its axis sloping diagonally towards the *Temple of Vesta;* this probably shows the original line of the *Sacra Via*, which once went past the side of the *Regia* and the *Temple of Vesta* to the front of the *Temple of Castor*, but was in later times diverted, and part of its original course built over; see p. 139. The existing remains of the *Regia* are of several different dates, which can easily be distinguished; *first*, walls built of large blocks, 2 Roman feet thick, of soft tufa, the earliest building material used in Rome; these belong probably to the regal period. *Second*, walls of blocks of hard tufa, part perhaps of the rebuilding after 390 B.C. or after 210 B.C.; and *lastly*, concrete walls faced with brick, and columns of travertine, both free and engaged, with a large quantity of fine mosaic paving, dating probably from a partial rebuilding carried out by Domitius Calvinus in 35 B.C. Dion Cass. xliii. 42.

The existing remains are not sufficient to show more than fragments of the plan of this house, which is one of the earliest existing specimens of domestic architecture in Rome. At one point there is a small room, one side of which is open, with two travertine fluted columns, arranged like those in the Tablinum of the Atrium Vestæ. In front of the engaged columns at another part of the house, a travertine channel

or open gutter for rain-water is still preserved; all the materials, tufa, travertine, or brick-facing, were covered thickly with stucco, both inside and outside the house, and were coloured with bright tints, and painted ornaments. The columns were coloured crimson, the rain-water channel bright blue, and the inner walls had simple paintings of leaf orna-

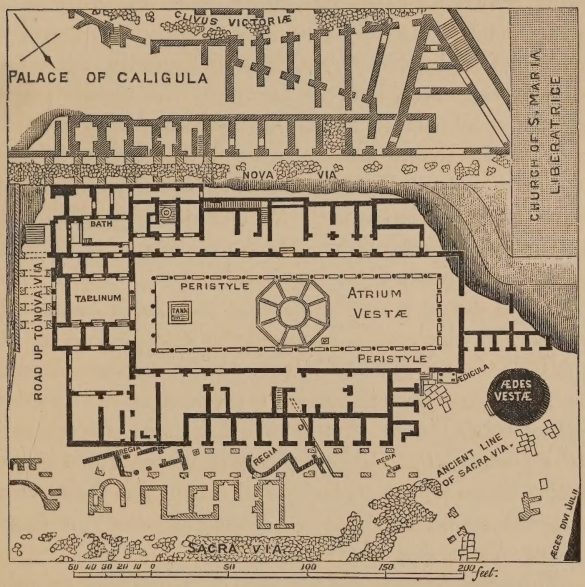

Fig. 21.

Plan showing the remains of the Temple of Vesta, the Regia, and the House of the Vestals, as rebuilt by Hadrian, excavated 1883–4.

ments, wreaths and flowers, the surface being divided into panels, with circles or garlands in the centre. Iron nails are driven into the walls to hold the stucco coating. The brick-facing resembles that of the *Rostra* 44 B.C., and the Pantheon 27 B.C., these being the three earliest examples of brickwork in Rome to which a date can be given with any degree of certainty.

The mosaic floors, now rapidly disappearing, were visible in many places, not only by the existing walls of the *Regia*, but also in some of the line of shops which form part of one side of the House of the Vestals. These mosaics have simple patterns, lozenges, hexagons, or squares in white marble and gray basalt. In the little brick-faced apse there is a graceful flowing scrollwork of foliage; other floors are made of hard white cement (*cœmentum marmoreum*) studded with irregular-shaped bits of the then rare Oriental coloured marbles. The fitting is very neat, and the *tesseræ* of the mosaic patterns are very small, closely resembling the other early specimens of mosaic in Rome, namely those in the *Temple of Castor*, and the so-called "*House of Livia*" on the Palatine. In the *Triclinium* of the latter the floor is similarly sprinkled with small irregularly shaped bits of oriental marbles and alabaster set on a white ground.[1]

Besides being a dwelling-house, the *Regia* contained a *sacrarium*, in which were preserved the sacred spears of Mars (Aul. Gell., iv. 6), which, like the *Ancilia*, announced coming woe by spontaneous movement; this happened before the death of Julius Cæsar. Within the *Regia* was also the shrine of the Goddess *Ops Consiva*, the wife of Saturn, a place of sanctity where no one was admitted except the Vestal virgins on special occasions, and the Pontifex Maximus or *Sacerdos Publicus;* Varro, *Lin. Lat.* vi. 21.

When the *Regia* was destroyed, it is probable that these *sacraria* were removed to the new house of the Vestal virgins, in which there was ample space, and many chambers thoroughly removed from all sight of the outer world.

The Atrium Vestæ or *House of the Vestals*, was excavated in 1883–4: it is on the whole the most important example of

[1] Unhappily, these very interesting remains of the Regia have already suffered much from exposure, the painted stucco is falling off, and the mosaics are being broken up wholesale, partly by the weather and also from injury done by the feet of visitors.

domestic architecture that has yet been discovered; in one respect, that of having a great part of the upper story

Fig. 22.

Section across the Atrium Vestæ.

A A A. Line of road behind the Tablinum.
B. Stairs to upper rooms now destroyed.
1. Large hall with niches for statues.
3. Small room opening into Tablinum (5).
7 is the room with the floor supported on half Amphoræ.
9 is the lower bath-room.

preserved, it surpasses in completeness any of the Pompeian houses.

The house of the Vestals, the *Virginea domus* of Martial, *Ep.* i. 71, 3, was more than once burnt and rebuilt, usually sharing the fate of the Temple of Vesta. It is recorded to have been burnt in the great fire of 191 A.D., during the reign of Commodus, but it can have been only the upper stories that suffered seriously then, as the existing very extensive ground-floor of the *Atrium Vestæ*, and even parts of the upper rooms, are shown by the brick stamps to be of the time of Hadrian. Nothing now existing appears to be earlier than this, and the whole house was evidently rebuilt, probably on a much enlarged scale, during Hadrian's reign. In order to gain increased space a great part of the lower slopes of the Palatine were then cut away, and an artificially levelled area formed of very large extent. The amount of earth removed during this process must have been very great. The result is that the house is set against the side of the hill in such a way that its south-west side stands against an artificially scarped cliff, about 20 feet high, so that the upper floor of the Atrium is about level with the *Nova Via*, which runs along the brink of this artificial cliff (see fig. 22). The *Tablinum* end of the *Atrium Vestæ* is also set, as it were, into the side of the hill, in a similar way to the south-west side. Thus the sill of the end window, which is high above the *Tablinum* floor, is level with the ground outside.

The plan of the *Atrium Vestæ* (see fig. 21) consists of a large open *Peristyle*, with rooms all round it, two or three stories high. On the north-east side is the principal entrance near the *Temple of Vesta*, and by it, on the outside of the building, are remains of a small *ædicula* or shrine, the brick and concrete *podium* of which, 10 feet wide by 7′-6″ deep, still exists, with parts of its marble lining and moulded plinth *in situ;* on this stood four columns supporting an entablature, the front and side of which now lie near the spot: on the

former is inscribed, in fine letters of the time of Hadrian,—

SENATVS · POPVLVSQVE · ROMANVS · PECVNIA ·
PVBLICA · FACIENDAM · CVRAVIT ·

The existing pieces include only the architrave and frieze, the cornice being lost. It seems probable that this little shrine contained a statue of Vesta, there being none within the temple.

On the north-east side of the Atrium is a row of small shops, which have no communication with the house; though the rooms which once existed above the shops did form part of the Vestals' house. Within these shops are considerable remains of the mosaic floors of the *Regia* mentioned above. At the back of these shops, and opening on to the *Peristyle*, are a number of good rooms, once very handsomely decorated with floors of marble slabs or mosaics, and having walls lined with polished marble. The whole house in fact, with the exception of the servants' offices, was once richly orna mented, with floors and walls wholly lined with rich Oriental marbles, and having moulded plinths and cornices cut in the rarer and more brilliant kinds, such as *Rosso antico* from Greece, and even the very hard porphyry and green basalt. Among the many fragments which were found during the excavations are included almost all the fine Oriental marbles, granites, porphyries, and alabasters, which were used during the period of Rome's greatest magnificence, and in many parts the walls appear to have been further decorated with the brilliant jewel-like mosaics made with *tesseræ* of coloured glass.[1]

On the north-east side are remains of stairs to the long range of upper rooms which on this side have fallen. At the south-east end of the *Peristyle* is the *Tablinum*, a sort of parlour,

[1] The central room on the left of the *Tablinum* is used as a store-place for these rich fragments, as well as for a number of objects in bronze, ivory, fictile ware, and marble sculpture, which were found within the *Atrium Vestæ*.

with a semicircular barrel vault, of which only part of the springing remains.

This was open, with two columns, at the end towards the *Peristyle*, whence it was approached by four steps between the columns; on each side of the steps marble *Cancelli* screened the Tablinum from the Peristyle. Part of the marble linings of this room and the moulded architrave of its side-doors are still *in situ*, as well as much of its marble paving, which is of three different dates. One small piece near the steps is of fine "*opus sectile*," with patterns of red porphyry and green basalt let into a white marble matrix; another part has a simple but carefully fitted pattern of small squares of Oriental marbles; and a third is of large rudely-set slabs of inferior marbles, evidently a late restoration.

On each side of the *Tablinum* are three small vaulted rooms, the whole number of which corresponds with that of the six vestals, probably not accidentally. The rooms on the right being damp from their position against the side of the slope, were carefully warmed with hot air-flues, and the floor of the central room is protected from damp rising in a very remarkable way. A number of large amphoræ were sawn in halves, and the whole area of the room covered with them; on these half vases the concrete *nucleus* and the marble paving-slabs were laid, leaving underneath the empty spaces in the sawn amphoræ which support the pavement.

The next room, at the back of the three small ones, is entered from a passage by the south angle of the *Peristyle;* it is a very curious room, and must have been almost without natural light when the floor over it existed. At one end it has a large bath, once marble-lined, with five small recesses for statuettes in the wall above the bath. An arch over this bath forms a bridge to reach three rooms on the south-west side of the room, the floors of which are at a higher level in the side of the hill (see fig. 22). This bridge was reached by steps ascending on to the top of a long, low, vaulted passage occupying

one side of the room; this appears to have been a furnace to warm the rooms near it and over it. The top of this furnace is paved with herring-bone brickwork; one flue passes from it straight upwards; another passes horizontally under the floor of one of the small rooms by the Tablinum. It evidently did contain a fire, but its great length and size are quite unaccountable.

On to the passage from which this bath-room is entered open several small vaulted rooms, which were kitchens, bake-houses, and other offices. One room has a corn-mill (*mola versatilis*) with circular channel round it for the slaves to walk in who turned the upper grindstone with the help of wooden levers. The space is too small to admit a horse or ass, animals which were usually used for this arduous labour.[1] In the adjoining room are three low corn-bins, and behind is an oven, the flue[2] of which is visible on the face of the wall behind the mill.

Next comes a staircase leading to the upper rooms which still exist in this part of the house, and beyond it some handsomely decorated rooms on the south-west of the *Peristyle*, one of which has a moulded plinth of *rosso antico* and other marble linings, still *in situ;* the adjoining passage has a plinth of white marble, and above that painted stucco on the walls, the colours of which, especially the orange and crimson, were very brilliant when first discovered; the designs are simple floral patterns, wreaths, and garlands, arranged in panels.

In the last room as yet excavated, at the west angle, lies a piece of its vaulted ceiling, richly decorated with paint-

[1] Two reliefs, on sarcophagi in the *Galleria lapidaria* in the Vatican, show how this was done—by blindfolded horses yoked to a wooden framing fixed to the upper grindstone in a rather complicated way (see fig. 23).

[2] The flue is of clay socketed pipes, 10 inches in diameter, set in a vertical channel formed in the brick facing of the wall, and then covered over with stucco.

ing of a similar character; it has a very high lustre, and was apparently executed by the methods described at p. 416.

At the end of the *Peristyle*, opposite the *Tablinum*, is a large room with *hypocaust* floor for warming it under its pavement of simple mosaic in white and gray. Part of this end is still buried.

The *Peristyle*, or large open court in the centre, was once

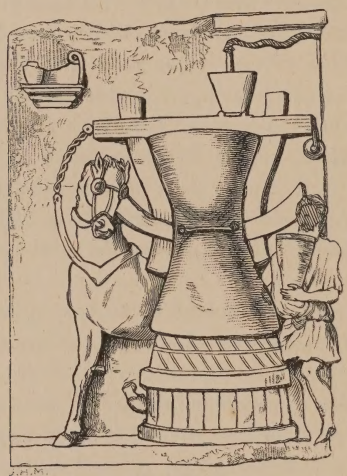

Fig. 23.

Corn-mill (*mola versatilis*) worked by a blindfolded horse, driven by a slave who holds a measure of flour. Above is a lamp on a bracket. This relief is on a sarcophagus, now in the Vatican.

very handsome. Its shape is unusual, being very long in proportion to its width, probably on account of the available site being narrow, limited as it was in the direction of the Palatine by the *Nova Via*. It was surrounded with large columns of the wavy green and white *Cipollino*, with white marble caps, bases, and entablature; very few fragments of these exist, and only one piece of column is *in situ*, though the positions of the others is marked by their massive travertine foundation-blocks.

The roofed aisle round the *Peristyle* was lined with polished marble, some of which is still in place, and was paved with simple mosaic, except near the *Tablinum*, where there is a rudely fitted floor made of slabs of many kinds of fine Oriental marbles, evidently belonging to some late restoration.

A number of small columns of the beautiful *breccia coralina* were found here, and possibly stood against the walls of the *Peristyle*, between the rows of statues.

Low parapet walls, covered with marble, are built between the main columns so as to screen off the colonnade from the central area. In the open space near the *Tablinum* end, is a large marble-lined tank for the water used by the Vestals in their lustral rites, and filled every day with fresh water brought from some sacred source. At another point is a small well-like shaft, which communicates with a large drain running under the whole building from south to north. Another large *Cloaca* runs from near the Tablinum direct to a sewer under the *Sacra Via*, which communicated with the *Cloaca Maxima*. A third large drain runs at a higher level under the *Nova Via*, skirting the Palatine side of the *Atrium Vestæ* (see fig. 22).

In the centre of the *Peristyle* are remains of a curious brick structure, a circle within an octagon (see fig. 21), which looks like part of the low curbs or borders round flower-beds. Professor Jordan has suggested that this was a miniature garden, made instead of the extensive *Lucus Vestæ*, which the Vestals once possessed. This sacred grove, which contained several shrines and altars, extended up the slopes of the Palatine, and must have been destroyed when Caligula built his enormous palace on that part of the hill which overhangs the *Atrium Vestæ*. Cicero, *De Div.* i. 45, mentions this *Lucus*, "qui a Palatii radice in Novam Viam devexus est."

The upper story of the *Atrium Vestæ*, a great part of which still exists on the side by the *Nova Via*, is one of the most

interesting parts of this building. It consists of a series of small rooms, all once lined with marble, most of which contain baths, and are warmed very completely with flue-tiles covering the walls, and *hypocausts*—floors built hollow, so that hot air could circulate under them. These were arranged with furnaces at the side, or below them, so that the hot air and smoke from the fire first passed under the floor, and then up the flue-tiles which lined the walls, and so escaped above the roof. These are the only examples yet found of *hypocausts* in an upper story. The small pillars (*pilæ*) which support the floors (*suspensura*) here rest on the vaults of the rooms below, which are filled in level with concrete. The floor of the room over the bath-room on the ground floor with the bridge (mentioned above, p. 192) has fallen in, but remains of it exist at the edges, showing that it was a very remarkable instance of the bold way in which the Romans used concrete.

The whole of this upper floor, about 20 feet in span, consisted simply of a great slab of concrete, 14 inches thick, merely supported at its edges by rows of travertine corbels, there being no intermediate support whatever. It is treated exactly as if it were one great slab of stone. A large and handsome marble bath opened out of this upper room; it is now approached by a wooden bridge. It is lined with slabs of *pavonazetto*, *cipollino*, *Africano*, and white marble. In the top of one of the recesses above this bath there are still remains of its lining of brilliant mosaics with *tesseræ* of coloured glass. Further on, there are remains of the stairs which led to a higher level still, a room over the barrel vault of the *Tablinum;* and behind the *Tablinum* there is a well-preserved mosaic pavement of a room on this upper floor, just above the recently discovered road which led from the *Sacra Via* up to the *Nova Via*. This road, unexpectedly discovered in September 1884, appears to have been constructed in the time of Hadrian; it is lined with piers and brick-facing of his time. But at a later period it was disused, and its upper part blocked up by build-

ings erected over it. This road, which was only for foot-passengers, is paved with herring-bone brick-work.

The upper story of the *Atrium Vestæ* contains very little, except a few pieces of bare wall, that is as early as the time of Hadrian; the greater part of it belongs to the rebuilding in the reign of Severus, after the great fire under Commodus, in 191 A.D. There are also many alterations and patchings, which appear to date from the end of the third and even the fourth century. Some of the upper rooms are paved with rudely shaped bits of marble, or even old tesseræ re-used, and laid on their sides, instead of end-ways, as they were meant to go, sure signs of a late and architecturally degraded period. It appears, in fact, that this house continued in use even after the last Vestal had died;[1] and at the north angle of the *Peristyle* remains were found of a house which had been built in the seventh or eighth century in the then ruined *Atrium*. Two of the inscribed pedestals to the Vestals had been built into the walls of this house. These pedestals still stand at the north corner, turned the wrong way; unfortunately the mediæval walling was all destroyed as soon as it was discovered, thus obliterating a very valuable piece of historical evidence. The walls too, while they existed, explained the curious position of the two pedestals, which is now quite unaccountable without a knowledge of what has been destroyed. In this interesting mediæval building an earthen vessel was found containing a large hoard of English silver pennies, namely, 3 of Alfred the Great (871–900); 217 of Eadward I. (900–924); 393 of Athelstan (924–940); 195 of Eadmund I. (940–6); and a few of Sitric and Anlaf Kings of Northumbria, and Plegmund, Archbishop of Canterbury, ranging between 900 and 947 A.D. In the same pot was found a bronze fibula with an inscription inlaid in silver— + DOMNO · MARINO · PAPA + Marinus II. occupied the Pontificate from 942 to

[1] The last of the Vestals is mentioned as being an old woman in 394 A.D. See Zosimus, v. 38.

946, and it appears probable that this interesting hoard was concealed during these years.[1]

Perhaps the chief point of interest in this most important excavation was the discovery of a number of portrait statues of the Vestals, at various points in the *Peristyle*, together with many pedestals belonging to the statues, each with a dedicatory inscription. Unfortunately the manner in which they were found leaves it uncertain which statue belongs to each pedestal. The statues, which are of heroic size, range from an almost complete figure to a mere fragment; they are of various dates, mostly of the third century, though one or two date from the second. The finest as a work of art, dating probably from the time of Trajan or Hadrian, is a very noble portrait of a stately middle-aged lady, the upper half of which only exists. This figure is of especial value as having the only known ancient representation of the sacred vestment called the *suffibulum*, a sort of hood made of a piece of white woollen cloth with a purple border, rectangular in form; this was folded over the head, and fastened in front below the throat by a *fibula*. Its use as a sacrificial vestment is mentioned by Varro, *Lin. Lat.* vi. 21; and it is described by Festus, Ed. Müller, p. 340—"*Suffibulum est vestimentum album oblongum quod in capite virgines vestales cum sacrificant semper habere solent, idque fibula comprehendebatur.*" In other respects the dress of this statue resembles that of the other Vestals, but it alone has this special sacrificial garment, which was peculiar to the Vestals. The other statues also are of unusual interest, for though many of the museums of Europe contain so-called statues of Vestals, yet these are the only authentic ones. The statues are all of Greek marble, mostly Parian, but a few Athenian. The costume of all is in the main the

[1] A detailed description of these coins is given by De Rossi as an appendix to the valuable work by Lanciani, *L'Atrio di Vesta*, Rome, 1883. De Rossi has suggested that this hoard may have been sent from England to Rome as *Peter's pence*.

same, though some slight variations occur. On the whole the design of the statues and the general arrangement of the drapery is superior to their execution, showing that the sculptors (*fictores*) followed older models. The costume is as

Fig. 24.

Portrait statue of one of the chief Vestals, showing the *Suffibulum* fastened in front by a brooch.

follows, a *stola* or gown reaching from the neck to the feet, bound round the waist by a cord, the *zona;* usually it is without sleeves, but in some cases there are short sleeves fastened with a row of loops and buttons. Over this is worn the *pallium*, an ample garment, folded round the body in a great variety of ways, giving great scope to the sculptor for the

arrangement of graceful folds and the avoiding of monotony. In many cases the *pallium* is thrown over the head like a hood; in others it is simply looped in rich folds around and diagonally across the body. Round the head of each the *vittæ* are twisted into a sort of coronet; these were fillets or rope-like rolls of linen, the ends of which in some cases, but not in all, appear falling in front over the shoulders.

The feet are shod in boots, apparently of kid or other soft leather; some have a separate division for the big toe. Though in most cases the hair is hidden by the *Pallium* and the *vittæ*, yet in some of the statues enough is visible to show that it was allowed to grow long, although on entering the noviciate the hair of the child Vestal was cut off.

One statue, that of a tall hard-featured lady, apparently a work of the end of the third century, has on the breast a number of metal pins, which show where the pendant of a necklace was fixed, though the ornament itself is missing.[1]

All the pedestals are inscribed to the *Virgo Vestalis Maxima*, or chief of the Vestals, a rank usually gained in order of seniority; the inscriptions on two of the pedestals of Flavia Publicia show that several lower grades were passed through before reaching this highest dignity.

The following are the inscriptions on the pedestals :—

1. TERENTIAE · FLAVOLAE ·
SORORI · SANCTISSIMAE ·
Virgini Vestali MAXIMAE ·
Q · LOLLIANVS · Q · F ·
POLL · PLAVTIVS · AVITVS ·
COS · (*Consul*) AVGVR · PR*ætor* CAND*idatus*

[1] In 1591 a statue of a Vestal, with the necklace still attached, was found on the Esquiline, together with its inscribed pedestal (*Cor. In. Lat.* vi. 2145). It is now lost. Ulisse Aldroandi also mentions that in 1556 twelve pedestals, with dedicatory inscriptions to Vestal Virgins, were found by the Church of S. Maria Liberatrice; that is, near the west angle of the *Atrium Vestæ*.

TVTEL*aris* · LEG*atus* LEG*ionis* VII ·
GEMINAE · PIAE · FELICIS ·
IVRIDICVS · ASTVRICAE · ET ·
GALLECIAE · LEG*atus* AVGG · PROV*inciæ*
ASIAE · QVAEST*or* CANDIDAT*us* TRIB*unus*
LATICLAVIVS · LEGION*is* · XIII · GEMIN*æ*
TRIVMVIR · MONETALIS · A · A · A · (*Auro Argento Aere flando feriundo*)
F · F · * CVM *
CLAVDIA · SESTIA · COCCEIA · SEVERIANA ·
CONIVGE · ET · LOLLIANA · PLAVTIA · SESTIA · SERVILIA · FILIA.

This is a dedication to the chief Vestal, Terentia Flavola, by her brother, Quintus Lollianus, and his wife and daughter. The year of his consulship is doubtful. Two other pedestals inscribed to this Vestal had previously been found: see *Cor. In. Lat.* vi. 2130 and 2144. One of these is dated 215 A.D.

The long list of honours and titles of Lollianus is an interesting one. He was *consul*, *augur*, *prætor*, *candidatus tutelaris; legate of the seventh legion; governor* of Asturia and Gallicia; *imperial legate* of the province of Asia; *quæstor candidatus; laticlave tribune* of the thirteenth legion; *triumvir of the mint*, with control over the coinage in gold, silver, and bronze.

2.

TERENTIAE ·
FLAVOLAE ·
V · V · (*Virgini Vestali*)
MAXIMAE ·
CN · STATILIVS ·
MENANDER ·
FICTOR ·
V̄ · V̄ · (*Virginum Vestalium*)
CN · STATILI ·
CERDONIS ·
FICTORIS ·
V̄ · V̄ · (*Virginum Vestalium*)
ALVMNVS.

Dedicated to the same chief Vestal by Cnæus Statilius Menander, a *sculptor to the Vestals*, and pupil of Cnæus Statilius Cerdo, also *sculptor to the Vestals*.

3. PRAETEXTATAE · CRASSI · FIL*iæ*
Virgini Vestali MAXIMAE ·
C · IVLIVS · CRETICVS ·
A · SACRIS.

Dedicated to the chief Vestal Prætextata by C. Julius Creticus, one of the religious attendants of Vesta.

4. NVMISIAE · L · F · (*Lucii filiæ*)
MAXIMILLAE ·
$\overline{V}$ · $\overline{V}$ · MAX ·
C · HELVIDIVS · MYSTICVS ·
DEVOTVS · BENEFICIIS · EIVS.

To the chief Vestal Numisia Maximilla, dedicated by C. H. Mysticus, "grateful for her benefits." Another inscription to this lady is dated 201.

The Vestals appear to have had considerable political influence, and probably controlled a good deal of patronage connected with religious offices. Next come six pedestals, all inscribed to the same chief Vestal, Flavia Publicia.

5. FLAVIAE · L · FIL ·
PVBLICIAE · V · V · MAX ·
SANCTISSIMAE · PIISSIMAEQ ·
CVIVS · SANCTISSIMAM · ET ·
RELIGIOSAM · CVRAM · SACRO*rum*
QVAM · PER · OMNES · GRADVS ·
SACERDOTII · LAVDABILI · ADMI
NISTRATIONE · OPERATVR · NVMEN.
SANCTISSIMAE · VESTAE · MATRIS ·
COMPROBAVIT ·
AEMILIA · ROGATILLA · C · F · SORORIS · FIL ·
CVM · MINVCIO · HONORATO · MARCELLO ·
AEMILIANO · C · P · FILIO · SVO ·
OB · EXIMIAM · EIVS · ERGA · SE
PIETATEM .

Dedicated to Flavia by her niece Æmilia Rogatilla, and her niece's son, on account of Flavia's remarkable kindness towards them. The inscription records that the goddess Vesta herself approved of Flavia's zeal and piety, and is also interesting for its mention of several grades of rank in the priesthood which were passed through before reaching the high dignity of *Virgo Vestalis Maxima.*

On the side of this pedestal is rudely scratched—

COL · V · ID · IVL
DDNN · · · AVG · II · ET
· · · CAES · COS .

The names are erased, but the only occasion in the third century when the consuls were an "Augustus for the second time" and a "Cæsar," was in the year 247, in the reign of Philip I., who in that year gave his son, the younger Philip, the title of Augustus; the inscription would be *Dominis nostris Imp. Cæs. M. Julio Philippo Pio Felice Augusto II. et M. Julio Severo Philippo Cæsare Consulibus.* The Senate after their death decreed a *memoriæ damnatio*, and hence their names are erased.

6. To the Same— FL · PVBLICIAE · V · V · MAX ·
SANCTISSIMAE · AC · RELIGIOSIS
SIMAE · QVAE · PER · OMNES · GRADVS ·
SACERDOTII · APVT · (sic) DIVINA · ALTARIA ·
OMNIVM · DEORVM · ET · AD · AETERNOS · IGNES ·
DIEBVS · NOCTIBVSQVE · PIA · MENTE · RITE ·
DESERVIENS · MERITO · AD · HVNC ·
LOCVM · CVM · AETATE · PERVENIT ·
BAREIVS · ZOTICVS · CVM · FLAVIA ·
VERECVNDA · SVA · OB · EXIMIAM · EIVS ·
ERGA · SE · BENIBOLENTIAM (sic) PRAESTANTIAMQ .

This contains a similar eulogy of Flavia's piety, and careful guardianship of the eternal fires.

On the side of the pedestal is rudely incised—

DEDICATA · PR · KAL · OCT ·
DD · NN · VALERIANO · AVG · IIII · ET ·
GALLIENO · AVG · III · COSS

This gives the date as the year 257 A.D.

7. To the Same—

FL · PVBLICIAE ·
SANCTISSIMAE ·
AC · PIISSIMAE ·
V · V · MAX ·
T · FL · APRONIVS ·
FICTOR · V · V · (*Virginum Vestalium*)
LOCI · SECVNDI ·
DIGNISSIMAE ·
AC · PRAESTANTISSI
MAE · PATRONAE ·
CVM · SVIS ·

Dedicated to his patroness Flavia, by one of the sculptors of the Vestals; the phrase *loci secundi*, probably refers to the position of his shop in a row of others.

8. To the Same—

FLAVIAE · L · F · PVBLICIAE ·
RELIGIOSAE ·
SANCTITATIS · V · V · MAX ·
CVIVS · EGREGIAM · MORVM ·
DISCIPLINAM · ET ·
IN · SACRIS · PERITISSIMAM ·
OPERATIONEM · MERITO ·
RESPVBLICA · IN · DIES ·
FELICITER · SENTIT ·
VLPIVS · VERVS · ET · AVREL ·
TITVS · 7 · 7 · DEPVTATI (*Centuriones deputati*)
OB · EXIMIAM · EIVS · ERGA · SE ·
BENIVOLENTIAM .

On the moulded plinth the letters G . P . (*Grati posuerunt*). The meaning of this is quite clear; it is dedicated jointly by Ulpius Verus and Aurelius Titus.

9. To the Same—

FLAVIAE · PVBLICIAE ·
V · V · MAX ·
SANCTISSIMAE ·
AC · RELIGIOSISSIMAE ·
M · AVRELIVS · HERMES ·

OB · EXIMIAM · EIVS ·
ERGA · SE · BENEVOLENTIAM ·
PRAESTANTIAMQVE .

Dedicated by Marcus Aurelius Hermes.

10. To the Same— FL · PVBLICIAE · V · V · MAX ·
SANCTISSIMAE · ET · PIISSI
MAE · AC · SVPER · OMNES
RETRO · RELIGIOSISSIMAE
PVRISSIMAE · CASTISSIMAEQVE
CVIVS · RELIGIOSAM ·
CVRAM · SACRORVM · ET ·
MORVM · PRAEDICABILEM ·
DISCIPLINAM · NVMEN · QVOQVE
VESTAE · CONPROVABIT (sic)
QVETVRIVS · MEMPHIVS · V · E · (*Vir Egregius*)
FICTOR · V · V · DIGNATIONES (sic)
ERGA · SE · HONORISQVE · CAVSA
PLVRIMIS · IN · SE · CONLATIS
BENEFICIIS .

This pedestal, unlike the others, is hexagonal in form, and was found, not in the Peristyle, but in a room near it. This also is dedicated by one of the sculptors to the Vestals, Queturius Memphius, with similar eulogies on this much-praised lady.

11. COELIAE · CLAVDIANAE · V · V
MAX · SANCTISSIMAE · RELIGI
OSISSIMAE · AC · SVPER · OM
NES · PIISSIMAE · CVIVS · OPE
RA · SACRORVM · GVBERNAN
TE · VESTA · MATRE · MAXI
MATVS · SVI · XX · CONPLERIT
AVRELIVS · FRVCTOSVS · CLI
ENS · ET · CANDIDATVS · BENIG ·
NITATAE · (sic) EIVS · PROBATVS
SIC · XX · SIC · XXX · FELICITER

This is dedicated to Cœlia Claudiana by Aurelius Fructosus, her client, in honour of her reaching the twentieth year of her

rank as *Virgo Vestalis Maxima;* it concludes with a wish that as she has completed twenty years of this office, so she may happily complete thirty.

Four other inscribed pedestals to this lady have been found, one bearing the date 286. Only one of these now exists; it is in the *Palatine Stadium*, near the entrance; see *Cor. In. Lat.* vi. 2136 to 2139.

On one pedestal the Vestal's name has been erased; it is the latest in date, being of the year 364. About this time some of the Vestals became Christians (Pruden. *Peristeph. Hymn.* 2), and it may possibly be for this reason that the name on this inscription has been cut out.

OB · MERITVM · CASTITATIS ·
PVDICITIAE · ADQ · IN · SACRIS ·
RELIGIONIBVS QVE ·
DOCTRINAE · MIRABILIS ·
· · · E · V · V · MAX ·
PONTIFICES · V · V · C · C · (*Viri Clarissimi*)
PROMAG · MACRINIO
SOSSIANO · V · C · P · M · (*Vir Clarissimus, pro meritis*).

Dedicated by Macrinius Sossianus, *Promagister* of the College of the *Pontifices of Vesta.*

On the side is

DEDICATA · V · IDVS · IVNIAS ·
DIVO · IOVIANO · ET · VARRONIANO ·
CONSS.

This gives the date as 364 A.D.

The Arch of Fabius.

The earliest triumphal arch erected in or near the *Forum Magnum* was that in honour of the victory of Q. Fabius Maximus over the Gaulish Allobroges, on account of which he received the honorary name *Allobrogicus* or *Allobrox.* This

happened during his consulship in 121 B.C.; see Liv. *Ep.* lvi.; Schol. ad Cic. *In. Verr.* i. 7; and Pliny, *Hist. Nat.* vii. 50. This arch marked the extreme limit of the Forum in this direction; see Cic. *Pro. Plan.* 7, 17. In 1540-50 excavations were made at this part of the Forum, and ruins of the Arch of Fabius were found close by the *Temple of Faustina;* on one of these fragments was inscribed Q . FABIVS . Q . F . MAXSVMVS . AED . CVR . REST. Unfortunately, the fragments found then were destroyed or used as building materials.

Again, in 1882, excavations at the same place brought to light about twenty-five fragments of this arch, which had escaped the limekilns of the sixteenth century.

Among these are massive travertine *voussoirs*, which give the span of the arch, together with caps and other parts of the piers. The *soffit* or under-surface of the arch was of *peperino*, the outer facings of *travertine*, and the inner core of the masonry of *tufa*. These fragments are now lying not far from the *Temple of Faustina*, on the other side of the ancient road; see *Ann. Inst. Cor. Arch.* 1859, p. 307; and *Notizie degli Scavi*, 1882, p. 225.

The *Arch of Augustus* was also at this end of the Forum, but it is impossible now to fix its exact site. It was set up in honour of Augustus's final victory at Actium in 30 B.C. (Dion Cass. li. 19). No remains of it now are known to exist, but a marble inscribed block from its attic was found during the excavations of 1540–50, with this inscription—SENATVS · POPVLVSQVE · ROMANVS · IMP · CAESARI · DIVI · IVLI · F · COS · QVINCT · COS · DESIG · SEXT · IMP · SEPT · REPVBLICA · CONSERVATA. The fifth consulship of Augustus was in 29 B.C., the year when he returned to Rome after his Egyptian victories in the year before; see Lanciani, *Not. degli Scavi*, 1882, p. 227.

The *Temple of Faustina the Elder* stands at the east angle of the Forum, facing on to the later line of the *Sacra Via*. It

was erected by Antoninus Pius in honour of his wife Faustina, who died in 141 A.D. After the death of the emperor it was dedicated by the Senate to him also, and an upper line added to the inscription on the architrave—DIVO · ANTONINO · ET | DIVAE · FAVSTINAE · EX · S · C . See Capitolinus, *Ant. Pius*, 6.

The greater part of the Cella has been destroyed through the conversion of the temple into the Church of *S. Lorenzo in Miranda*, but the front is still well preserved, and is now excavated down to its original level. It is Corinthian, *hexastyle*, *prostyle*, with fine monolithic columns of *Cipollino* (Carystian marble), and a well-sculptured frieze in white Athenian marble, with good reliefs of griffins and candelabra. The *Cella* is built of massive blocks of peperino, fitted in the most wonderfully perfect way, and all was once lined with slabs of white marble. The brick and concrete foundations of the marble steps in front still exist, and in the centre of the flight a pedestal for a statue, which is a later addition.

By the south-east side of the temple, which is now excavated, are remains of a very fine pavement, made of large slabs of Hymettian marble; this appears to be part of the paving of a *peribolus* or enclosure which once surrounded the temple, probably extending in front of the steps over the space now partly occupied by the later line of the *Sacra Via*. This *peribolus* and its low enclosing screen are indicated on the coins which show the Temple of Faustina.[1]

In later times, fourth or fifth century, some baths appear to have been built over this fine massive pavement. A small bath, with thin marble veneer, is actually sunk into a hole cut through the marble slabs.

This brings us again to the site of the great Basilicas, which faced on to the north-east side of the Forum, and completes the circuit of the buildings round it.

[1] This Temple is shown on coins struck in honour of the deified Faustina by Antoninus Pius, with the legend DEDICATIO · AEDIS .

The Temple of Concord.

The space between the *Tabularium* on the Capitoline Hill and the north-west end of the Forum is partly occupied by a very important range of buildings. The chief of these is the *Temple of Concord*, in itself one of the most magnificent in Rome, and remarkable above all for its wonderful collection of works of art; see Forum plate and *marble plan* on do.

It was founded by Camillus in 367 B.C. (Plut. *Cam.* 42); rebuilt by L. Opimius in 121 B.C. (Plut. *Grac.* 17; and Appian, *Bell. Civ.* i. 26); and again rebuilt, on an enlarged scale, with great splendour, in the reign of Augustus, like the Temple of Castor, by Tiberius and Drusus, out of the spoils won in Germany, Suet. *Tib.* 20; and Ovid, *Fast.* i. 637 *seq.*; in the latter passage Ovid alludes to its being by the *gradus Monetæ*, a long flight of steps leading from the Forum up to the temple of *Juno Moneta* on the *Arx*. These steps appear to have descended past the Tabularium and the Temple of Concord down to the *Tullianum* or *Carcer*, now called the "Mamertine Prison"; and a lower flight from the prison to the Forum was known as the *scalæ gemoniæ*, or "stairs of sighs," as Pliny calls them (*gradus gemitorii*). On these were exposed the bodies of criminals who had been killed in the prison or near it; the corpses of Sejanus, Vitellius, and many other distinguished persons were flung on these ill-omened stairs.

The existing remains of the Temple of Concord date from the rebuilding under Augustus. Though at first sight it seems that little besides the rough concrete of the *podium* now remains, yet a careful examination will reveal much that is interesting, and enable a satisfactory restoration to be arrived at. The modern road covers part of the great flight of steps which led down to the Forum, and part of the *Cella* is still concealed by the road which slopes up past the end of the *Tabularium*. The lower part of the *podium* wall consists of large, closely fitted, and well-clamped blocks of hard tufa,

once lined with slabs of white Greek marble, and having a moulded plinth and cornice.

In plan this temple is very unusual, consisting of a large *Cella*, much wider than its depth, and an extensive projecting Portico, forming a large covered platform capable of holding a considerable crowd of people; from this a wide and lofty flight of steps sloped down towards the back of the "*Græcostasis*" and the *Rostra*. Within the great *Cella* were rows of columns set against the walls; these rested not on the floor of the *Cella*, but on a projection, like a low wall, forming a continuous shelf to hold some of the numerous statues which crowded this temple. The construction of this low projecting wall, built of mixed materials, shows the positions of the missing inner columns; where each column came it is built of the hard travertine, while the intermediate part, which only had the weight of the statues to bear, is constructed of concrete and blocks of tufa, used very much at random. On one of these travertine piers can be seen marks of the column which once stood there, and the holes for its metal clamps. These had bases of white marble, sculptured with the utmost richness and beauty of workmanship; several of these (unlabelled) are now in a passage on the ground floor of the Capitoline Museum, and are worthy of study as being perhaps the most beautiful architectural fragments in Rome, dating from the time of Augustus, which was the period of the greatest artistic refinement in matters of detail.

Some of the internal marble lining of the *Cella* is still in place, and well preserved, especially at one point where it has been protected by the addition of a large pedestal for a statue. There is a well-moulded plinth (see fig. 3) of yellow Numidian marble; above that large slabs of the beautiful purple-stained *pavonazetto* from Phrygia, and below the moulding, *cipollino* and other marbles. These linings are fixed with great care by clamps and hooks of bronze and iron, run with lead. The floor is paved with large neatly-jointed slabs of *Porta Santa*,

pavonazetto and *cipollino*, of which many fine pieces exist. The threshold of the central door into the *Cella* is formed of enormous monoliths of *Porta Santa* marble, 21 feet 6 inches long; in the centre are two deep socket-holes for bronze bolts; and near them is the sunk matrix in the marble, in which was once inlaid a small bronze *caduceus*—symbol of concord.

Like the Temple of Castor and other temples in Rome the whole *podium* is filled in solid with concrete, made of tufa, poured in between the massive walls built of carefully clamped tufa blocks. A long narrow chamber was formed in the concrete, leading from the front of one wing of the *podium* toward the *Tabularium*, with which it has been supposed once to have communicated, but this never was the case. It will easily be seen that when the temple was complete it must have concealed a large part of the wall of the *Tabularium*, against which it abuts, and even have blocked up some of its arches. On the face of the *Tabularium* wall is an interesting piece of evidence, which shows that the older *Temple of Concord*, in existence when the present *Tabularium* was built in 78 B.C., was considerably smaller than that of which remains now exist. Part, and part only, of the wall concealed by the temple is left somewhat rough on the face; not neatly dressed as the rest is; and this rough part is precisely that extent of wall which was concealed by the older temple; the builders of the *Tabularium* naturally not thinking it worth while to dress to a smooth surface that portion of their wall which would not be seen. The end of the rough surface can easily be traced just under the middle of the last window on the right, in the lower story of the *Tabularium*.

The main cornice of the exterior of the temple is very large and beautiful, both in design and workmanship.[1] A

[1] The *Einseidlen* MS. gives part of the inscription on the architrave, now wholly lost, S · P · Q · R · AEDEM · CONCORDIAE · VETVSTATE . COLLAPSAM · IN · MELIOREM · FACIEM · OPERE · ET · CVLTV . SPLENDIDIORE · RESTITVERVNT.

portion of it has been pieced together very cleverly out of existing fragments, and is preserved under the upper arcade of the *Tabularium*. In workmanship and almost wholly in design it is a fine specimen of Greek art; it differs, however, from pure Hellenic work in having its members more overlaid with surface enrichments than was usual in Greece. The large acanthus leaves, which cover the main *Cymatium*, are carved with great delicacy and spirit, and the whole is a perfect model of an elaborate Corinthian cornice, probably the finest of this great size that exists, either in Rome or out of it.

The general design of the *Temple of Concord* is well shown on the reverse of a *first brass* of Tiberius, much more carefully and minutely executed than is usual with representations of buildings on Roman coins. This gives a front view of the great Portico, with the *Cella* projecting like a wing on each side; and in each wing a large window, probably introduced by the architect to give light to the many works of art within. Statues grouped under the Portico and at its sides are shown, and also the pedimental sculpture; and a group of three figures embracing, as a symbol of concord, at the apex, and others up the slope of the pediment.

The Senate frequently met in this temple; and it was here that Cicero delivered two of his orations on the Catiline plot: here too, on the Portico, Cicero and the Senate, supported by the Roman knights, withstood the partisans of Antony after the murder of Cæsar; see Cic. *Phil.* vii. 8. It appears probable that this extensive Portico took the place and name of the ancient *Senaculum* or preliminary place of meeting, used by the Senate before entering the *Curia*.

The Cella of this Temple appears to have been a sort of museum of ancient works of Greek painting and sculpture, engraved gems, gold and silver plate, and other objects.

A group of *Latona*, with the infants *Apollo* and *Diana*, by Euphrenor, is mentioned by Pliny (*Hist. Nat.* xxxiv. 19); a

picture by Zeuxis of *Marsyas* (*Hist. Nat.* xxxv. 36); a picture by the Athenian Nicias of *Liber* or Bacchus (*ib.* 40); four elephants cut in the very hard Æthiopian Obsidian which were presented as curiosities by Augustus (*Hist. Nat.* xxxvi. 67); and, greatest treasure of all, the Sardonyx ring of Polycrates, king of Samos, which, after being thrown into the sea to propitiate the Fates, was, by means of a fish brought back to the doomed tyrant; this treasure was enclosed in a golden horn (*Hist. Nat.* xxxvii. 2); Pliny is, however, rather incredulous as to the authenticity of this celebrated relic.

Another *Temple of Concord*, founded in 219 B.C., stood on the Capitoline *Arx* (Liv. xxii. 33, and xxvi. 23); and also a bronze *Ædicula of Concord* in the *Area Vulcani*, probably near the great *Temple of Concord;* this was dedicated by Cn. Flavius in 305 B.C., Liv. ix. 46; according to Pliny (*Hist. Nat.* xxxiii. 6) it stood—"*in Græcostasi, quæ tunc supra Comitium erat.*"

The Temple of Vespasian stands close by that of Concord, and abuts on to the *Tabularium* in a similar way, blocking up the archway at the foot of the long flight of steps which led from the foot of the Capitoline Hill to the rooms in the *Tabularium* which faced on to the *Asylum* (see p. 240). This Temple was built by Domitian, about 94 A.D., in honour of his father; it underwent important restoration in the reign of Severus, as was recorded on the entablature; the inscription on which is quoted in the *Einseidlen* MS.—DIVO · VESPASIANO · AVGVSTO · S · P · Q · R[1] · IMPP · CAESS · SEVERVS · ET · ANTONINVS · PII · FELIC · AVGG · RESTITVERVNT; part of the last word only now exists.

The existing three columns, with their finely sculptured frieze and cornice, evidently belong to the original Temple; the work is far too well executed for the time of Severus; these columns were taken down and more securely refixed by the French at the beginning of this century. The Temple was

[1] To this point the inscription is the original one of the time of Domitian; the rest is the addition recording Severus's restoration.

Corinthian, *hexastyle*, and *prostyle*, with a nearly square *Cella*, containing a very large marble-lined platform or pedestal at the end opposite the door; the interior had ranges of columns against the walls, set on a projecting shelf, as in the *Temple of Concord*, which is built in the same way, with travertine piers and intermediate filling-in of concrete. Holes for fixing the marble base of one of these columns are visible on the top travertine block, at one point in this low internal wall or dado; and some of the slabs of white marble which rested on the dado are still in their place. What exists of the Cella wall is of massive blocks of travertine, very finely jointed, without mortar and clamped with iron run with lead. This was lined outside with white Pentelic marble; a good deal of the richly moulded plinth of the *podium* still remains *in situ*, and indications of the *podium* cornice can be traced against the wall of the *Tabularium*. The inside of the Cella was lined and paved with coloured Oriental marbles in a similar way to the *Temple of Concord;* some of this lining still exists.

The rich details of the entablature can best be studied in the arcade of the *Tabularium*, where a piece has been restored. It is equal in beauty of workmanship to that of the *Temple of Concord*, but is less pure in style, being somewhat over-loaded with ornament; the *corona* is fluted, and no plain flat surfaces are left as a relief to the eye. The great egg and dart moulding is under cut, almost with the skill of a chinese puzzle, and minute ornaments are introduced which are quite invisible when the work is in its place at a great height above the eye. The beautiful floriated patterns, which cover each egg of the lower egg and dart member, are worked with the delicacy of a cameo brooch, although not a trace of these patterns could be visible from below.

On the frieze are sculptured ox sculls and sacrificial instruments, worked with great care and richness of design; on the *præfericulum* or ewer is a minute relief of a battle between a bull and a rhinoceros; the *patera* or libation-plate is fluted,

and has a well modelled head in the centre. Other objects, no less carefully sculptured, are the *aspergillum* or holy-water sprinkler, the *securis* or axe with which the *Popa* killed the victim, the *culter*, a straight edged knife; a *cochlear* or spoon for pouring the libations of blood, and a *galerum* or flamen's woollen cap with the *apex*, a wooden spike, at its top.

In the narrow space (scarcely 7 feet wide) between the *Temples* of *Vespasian* and *Concord*, a small brick and concrete shrine is built against the wall of the *Tabularium;* this was a little vaulted room apparently two stories high, once lined with marble; marks of its vault are visible against the *Tabularium* wall.

Owing to the discovery at this point of a marble pedestal dedicated to Faustina,[1] it has sometimes been assumed that this little shrine was an ædicula erected in her honour. This is, however, a mistake, as the chamber is contemporary with the adjacent *Temple of Vespasian;* and is therefore many years earlier than the time of either of the two Faustinæ; this is proved by the fact that the moulding on the marble plinth of the Temple of Vespasian is not worked, but the block is left in the rough, at that part where the wall of this *ædicula* comes upon it. If the *ædicula* had been a later addition the moulding would of course have been worked, as it would in that case have been visible till the ædicula was added. It appears possible that this little shrine was dedicated to Titus, whose name does not appear jointly with Vespasian's in the inscription (given above) on the entablature of the large temple.

The *Notitia*, *Reg.* ix., mentions dedications to both Vespasian and Titus; which seems to show that some building in honour of the latter did exist; see Preller, *Regionen der Stadt Rom.*

When the *Temple of Vespasian* was built, the level around it was artificially lowered; traces of the older level are visible at the side of the tufa substructions of the *Temple of Concord*,

[1] See above, p. 167.

where a line of travertine, built into the tufa, shows the position of the former travertine paving, which was hacked away when a new pavement of travertine slabs was laid, about 2 feet 6 inches below the earlier level. Parts also of the concrete foundation and rough footing stones of the *Tabularium* were laid bare by the same alteration, as is shown on p. 240.

Next comes the *Porticus of the Dii Consentes;* this conjunction of twelve chief deities was of Etruscan origin; they were six of each sex, and were called the *Senatus Deorum;* see Varro, *Lin. Lat.* viii. 70, and *De re rust.* I. i. In the latter passage, Varro mentions twelve gilt statues of these deities as existing in his time; and in the former he remarks that these shrines were popularly called *Deum Consentum*, instead of the more correct form *Deorum Consentium.* The Forum plate shows these little chambers set against the slope of the *Clivus Capitolinus*, which was quarried away to make room for some of the shrines; the bare tufa rock is visible at the back of two of them; others have a back wall of tufa masonry, or brick-faced concrete; the latter appears to date from the Flavian period; the tufa wall is probably of the Republican period.

The *Porticus* with Corinthian columns of *Cipollino* (much restored by Canina), is late in date, as is recorded on the entablature. This inscription records a restoration by Vettius Prætextatus, Præfect of the City in 367 A.D.

These shrines are built on a large marble-paved platform, set against the slope of the hill; and under it, towards the temple of Vespasian, is a row of small rooms, seven in number, which were used as the offices (*Schola*) of the scribes and *præcones* of the ædiles. They are usually known as the *Schola Xanthi* from an inscription (now lost) which recorded their restoration, and the erection of seven silver statues of gods by A. Fabius Xanthus and others (Gruter, *Inscrip.* 170, 3.)

"*Clerks of the Clivus Capitolinus*" are mentioned by Cicero (*Phil.* ii. 7); these clerks were probably occupants of a similarly

placed row of offices, which existed before the present ones were built. The brick facing of the concrete walls of the existing rooms is of the Flavian period. The rooms were lined outside with white marble and have fine marble thresholds; inside they were stuccoed and painted.

The Arch of Severus stands to the north of the *Rostra*, across a basalt-paved road, the line of which appears to have been slightly altered when the arch was built. Remains of the ancient travertine curb, at several places along the north-east side of the Forum, give the older direction of this road (see Forum plate). This arch was erected in 203 A.D., after victories in Parthia and other eastern countries, in honour of Severus and his sons Caracalla and Geta.

After the death of Severus, when Caracalla had murdered his brother, he ordered all statues and reliefs of Geta to be destroyed, and his name to be erased from all inscriptions. Traces of erasure are visible on this arch from the holes which still remain, by which the bronze letters of Geta's name and titles were fastened to the marble attic. Representations of this arch on coins of Severus show that its attic was surmounted by a bronze chariot drawn by six horses, in which stood a figure of Severus, crowned by victory; at the sides of the chariot were statues of Caracalla and Geta; and an equestrian statue stood at each angle.

The arch is built of massive blocks of white Pentelic marble, except the base, which is of travertine lined with slabs of marble. The steps cut under the two side arches are a late addition, as is also the basalt-paved road under the central arch.

According to Fea marble steps were found by him under the late basalt-paving of the central arch; but if this is the case, it is difficult to see how chariots could have passed through it, unless temporary wooden planking was laid over the steps for use during triumphal processions.

The four large reliefs over the side arches, though poor

works of art, are very interesting for their representations of scenes of battle and sieges in the east. The one on the left, on the side towards the Forum, represents victories in Mesopotamia; the relief of Nisibis by Severus after the defeat of his rivals Pescennius Niger and Æmilianus in Pontus, in the year 195 A.D. Another part of this relief represents the siege of Carræ. Over the right hand arch, on the same side, is represented the siege of Hatra on the Tigris, and the submission of Abagarus King of Osrhoene. On the side towards the Capitol, over the right hand arch, is the taking of Babylon, and the flight thence of the Parthians; and also another siege of Hatra in 199 A.D. Over the left arch is the siege of Seleucia and Ctesiphon; the defeat of the Parthian King Artabanus, and his Arabian allies, in 201–2 A.D. In the spandrels of the central arch are winged victories bearing trophies, and four small figures representing the four seasons. In the spandrels of the side arches are the river gods of the conquered countries, the Euphrates, Tigris, and two tributaries. On the pedestals of the columns are life-sized reliefs of captives driven by Roman soldiers, the same design being mechanically repeated. The large panel on the attic is occupied with a long inscription repeated on both sides, announcing the titles and honours of Severus and Caracalla, and that the arch was erected "ob rempublicam restitutam imperiumque Populi Romani propagatum." Additional titles after the name of Caracalla (who is here called *M. Aurelius Antoninus Pius*) occupy the place of the erased names of Geta. The large reliefs are very much over-crowded with figures, and have but little decorative effect; instead of being framed in panels, with mouldings round them, as in arches of a better period, they are crowded close up to the columns and entablature. The capitals of the order are of debased *Composite* style. The *soffits* of the three arches are richly decorated with *lacunaria*, sunk coffers with enriched moulding and centre flowers, all coarsely executed, but very effective.

The Central Area of the Forum.

This irregularly-shaped space (see plate) is paved with massive slabs of travertine, a great many of which are evidently late in date. On the earlier part, where the slabs are laid more evenly and more closely jointed, are incised the series of lines mentioned above (see p. 147). One monument of the highest interest stands in this central area, near the *Column of Phocas*. It consists of two short marble walls, or *plutei*, each with its plinth and cornice returning round the ends, showing that it is not part of a longer wall, but complete in itself. These are set on travertine blocks, evidently of late date, and there are no indications to show what the use of these marble walls was, or even their original position. On the insides of these, as they are now placed, repeated twice over, are very spirited reliefs of a sacrificial bull, boar, and ram, the Roman *Suovetaurilia*, each decorated with fillets and wreaths. On the other sides are very interesting reliefs of scenes in the reign of Trajan, to whose time the sculpture belongs. They are of special interest for the views in the background of buildings in the Forum, some of which can be clearly identified. On the left of the relief towards the Capitol, the emperor is standing on the *Rostra*, the beaks of which, in two tiers, are represented; behind him are a number of attendant figures, and in front, standing on the ground, a crowd of men holding up their hands in acclamation. Behind the *Rostra* a triumphal arch is shown, and a temple raised on a lofty *podium*. These are probably the *Temple of Castor*, and the *Arch of Augustus*. On the right the emperor appears again, seated on a platform, with male figures behind him; in front stands a female carrying a baby, and leading an infant by the hand (much broken). This represents the institution in A.D. 99, by Trajan, of a charity for destitute children; the same scene occurs on one of his first

brasses, with the legend ALIM[ENTA] ITALIAE[1] (Cohen, ii. 303–5).

On the extreme right is the *Statue of Marsyas* (Hor. *Sat.* I. vi. 120, and Plin. *Hist. Nat.* xxi. 7), and the sacred *fig-tree*, probably that mentioned by Pliny (*Hist. Nat.* xv. 20), as having sprung up in the Forum; not the *Ficus Ruminalis* on the *Comitium*. The fig-tree is surrounded at its base by a sort of square marble *puteal;* Marsyas is represented as an aged faun bearing a wine skin. Behind the main group is a long row of arches, evidently the lower story of the *Basilica Julia*.

On the other *pluteus* the emperor is again represented on the *Rostra*, seated; the greater part of his figure is missing. In front a number of men bring tablets, and pile them in a heap before him, ready for burning. This records Trajan's remission of certain arrears of taxes due to the Imperial treasury (Spartian, 7). On the left the *fig-tree* and *Marsyas* are again shown, and next to them the lower arches of the *Basilica Julia* are repeated. On the right is an *Ionic hexastyle* temple, evidently that of Saturn; and a *Corinthian hexastyle* temple, clearly that of Vespasian; the Ionic and Corinthian capitals are distinctly shown on both these temples; between them is an arch, probably that of Tiberius, across the *Sacra Via*.

Other explanations of these reliefs have been given, but the above are perhaps the most satisfactory.[2] In representations like these of Roman buildings, or those that appear on coins, accuracy must not be expected; and too much stress should not be laid on the relative positions of objects shown in these reliefs; as most certainly the sculptor would take any liberties that suited his space or composition. It will be observed that the temple on the first relief is shown with the impossible number of five columns on its front.

[1] The full legend would be "*Alimenta ingenuorum puerorum et puellarum Italiæ.*"

[2] See Brizio, *Ann. Inst.*, 1872, p. 309; Henzen, *Bull. Inst.* 1872, p. 81; and Jordan, *Marsyas auf den Forum*, Berlin, 1883.

Towards the other end of the Forum, immediately over the line of the *Cloaca Maxima*, are remains of a large concrete and brick pedestal, which is sometimes supposed to be that of the equestrian statue of Domitian, described by Statius (*Silv.* i. 22) as standing in front of the temple of *Divus Julius*. But this statue was destroyed immediately after the death of Domitian, and the materials of the concrete and the character of its brick facing show that it is very much later in date than his time. It is more probable that it was the base of the bronze equestrian statue of Constantine, mentioned in the *Notitia*, *Reg.* viii.

Near the Arch of Severus there is a fine marble pedestal of an equestrian statue, which has been treated in an extraordinary way. It is set up endways, and on it is incised an honorary inscription, of the year 383 A.D., to Arcadius and Theodosius, a striking example of the artistic barbarism of the end of the fourth century.

Remains of small marble structures (shown on Forum plate) exist along the north-east part of the central area. Their use is not known; but they look like small *ædiculæ*. Near the marble *plutei* there are also traces of a nearly-square building with rudely moulded plinth. These are all of late date, not earlier than the third or fourth century.

Another great marble pedestal near the Arch of Severus appears to have once supported an equestrian statue; it is inscribed in honour of Fl. Jul. Constantius, c. 340 A.D.

Of almost equally late date is the pedestal of a column near this point, sculptured with rude reliefs of sacrificial scenes, and inscribed on a shield held by Victories, CAESARVM · DECENNALIA · FELICITER. Its reliefs are a striking example of the utter degradation of Roman art during the fourth century, sunk into hopeless and ignorant copyism, and absolutely devoid of any life or vigour such as often exist during periods of complete technical unskilfulness, when a people are struggling out of barbarism towards a growing sense of beauty.

The seven cubical brick and concrete structures, which line

the *Sacra Via* opposite the *Basilica Julia*, are also not earlier than the time of Constantine. They were once lined with marble, with heavy moulded plinths and cornices, many pieces of which are strewn around. They were pedestals for statues mounted on tall columns, such as those shown behind the *Rostra* in the relief on Constantine's Arch. (See p. 163.) Some broken pieces of these columns lie near. They are of Egyptian granite, and some appear to have been decorated with bronze reliefs, the metal pins to fasten which still remain embedded in the granite. It is probable that these seven columns occupied the former line of the *Tabernæ veteres*.

The most conspicuous monument of the mid-Forum is the Corinthian column erected in honour of the bloodthirsty tyrant Phocas by Smaragdus, in the eleventh year of his exarchate (A.D. 608). The name of Phocas is erased, but the date shows that it was erected in his honour by the servile Exarch of Ravenna. It is a fine fluted column, stolen from some building of a good period, and is raised on a rudely heaped-up pile of steps, partly marble and partly of blocks of tufa. This monument shows that the Forum was still unburied in rubbish as late as the seventh century, as its steps go down to the old level of the pavement.

A strip of the whole narrow south-east end of the Forum was occupied in the fourth century by a long brick and concrete building, lined with marble. (See Forum plate.) This was, unfortunately, nearly all destroyed by Comm. Rosa, who excavated this part of the Forum; but its extent can be traced by the remains of its moulded marble plinth, a great part of which is still *in situ*.

Countless fragments of other buildings, statues, and reliefs are scattered about the Forum. Among them some of the fine tiles of Parian marble, which under the Empire were used for roofing, and many pieces (near the *Rostra*) of the marble channels to carry off rain-water, which usually were set outside of Roman temples and other buildings.

A very interesting relief is set against the *Temple of Castor*, by the small side steps at the east angle. It appears to be part of the capital of a Corinthian pilaster. Among the acanthus foliage there is a winged Victory sacrificing a bull before the statue of some female deity; behind is a reclining figure of the goddess *Tellus* or the Earth, holding a cornucopiæ; an infant is climbing on her lap.[1]

Countless pieces of all the rich Oriental marbles, alabasters, porphyries, and granites, show how magnificent the *Forum Magnum* must once have been; the rich colours of these being set off by vast masses of polished white marble of which the buildings were mainly constructed, and contrasting with the metallic gleam of the many statues in silver and gold-plated bronze, which at its time of greatest splendour thickly crowded the whole of the *Forum*.

[1] This allegorical figure is common on the reverses of coins, but does not very often occur in marble reliefs.

CHAPTER VII.

THE CAPITOLINE HILL.[1]

In pre-historic times this hill was called the *Mons Saturnius*, see Varro, *Lin. Lat.* v. 41; its name being connected with that legendary "golden Age" when Saturn himself reigned in Italy. One record of these primitive traditions still exists in the *Temple of Saturn* at the foot of the *Clivus Capitolinus*, which was fabled to stand on the site of the altar erected to Saturn by the companions of Hercules (see p. 145).

This hill, which, like the other hills of Rome, has had its contour much altered by cutting away and levelling, consists of a mass of tufa rock harder in structure than that of the Palatine hill. It appears once to have been surrounded by cliffs, very steep at most places, and had only approaches on one side—that towards the Forum; first, by means of the winding continuation of the *Sacra Via*, which led past the *Tabularium* up to the *Asylum*, and thus to the yet higher levels of the Arx and the *Temple of Jupiter Capitolinus;* and secondly by the *gradus monetæ*, past the other end of the *Tabularium*, leading straight up to the *Arx*.

The top of the hill is shaped into two peaks of about equal height, one of which was known as the *Capitolium*,[2] and the other as the *Arx* or Citadel; these are clearly distinguished

[1] The existing remains of the very ancient wall which surrounded the Capitol are described in the section on the wall of Servius, see p. 62.

[2] In late times the whole hill is sometimes loosely spoken of as the *Capitolium*.

in many passages of classical writers, especially by Livy, vi. 20, who in this chapter repeatedly speaks of these two summits as being distinct parts of the hill. Strabo also (v. 3) describes the intermediate valley or *Asylum* as being between the *Arx* and the *Capitolium*—μεταξὺ τῆς ἄκρας καὶ τοῦ Καπιτωλίου; see also Aul. Gel. v. 12. It was in this valley that Romulus is said to have established his *Asylum* or refuge for fugitives from the neighbouring towns in order to increase his little settlement. This hill is said to have become the great stronghold of the Sabines under their king Tatius, who from that secure fortress frequently harassed and even defeated the Latins of the Palatine, till the two village-forts were united by alliance, and finally under the rule of one king, Romulus. As a stronghold it must have been even more impregnable than the Palatine, being more completely surrounded by nearly perpendicular cliffs, and so much smaller as to be more easily defended by a small garrison.[1]

The *Capitolium* was also in early time known as the *Mons Tarpeius*, so called from the familiar legend of the treachery of Tarpeia, told by Propertius, *El.* iv. 4; see also Varro, *Lin. Lat.* v. 41. Dionysius (ii. 40) adopts a different tradition, which makes Tarpeia fall a victim to her heroic attempt to deceive the Sabine assailants. In later times the name *rupes Tarpeia* was applied, not to the whole peak, but to a part of its cliff which faced towards the *Vicus Jugarius* and the *Forum Magnum.* The identification of that part of the Tarpeian rock, which was used for the execution of criminals, according to a very primitive custom, is now almost impossible. At one place the cliff of the *Capitolium* is quite perpendicular, and has been cut very carefully into an upright even surface; a deep groove, about a foot wide, runs up the face of this cutting, and there are many rock-cut chambers excavated in this part

[1] The *Arx* on the Quirinal Hill, where the Sabine Numa lived, was also called *Capitolium*, and was named *Capitolium Vetus*, to distinguish it. It also possessed a triple temple to Jupiter, Juno, and Minerva.

of the cliff, some openings into which appear in the face of the rock. This is popularly though erroneously known as the *Tarpeian rock*, and the little alley which leads to the foot of it is called the *Vicolo della rupe Tarpeia;* the perpendicular cliff was once very much higher than it is at present, as there is a great accumulation of rubbish at its foot.

At the top several courses of the tufa blocks of the very primitive circuit-wall of the hill can be seen from below. These remains appear to be earlier in date than the wall of Servius; the blocks are composed of the soft reddish tufa which forms the Capitoline Hill, and their rough workmanship resembles that of the so-called Wall of Romulus. They probably belong to that very primitive period when the Capitoline Hill was an independent fortress, with complete circuit-wall of its own.

That this cliff cannot be the *Tarpeian rock* where criminals were executed is shown by Dionysius (viii. 78, and vii. 35), who expressly says that this took place in the sight of people in the *Forum Magnum*, so that the popular Rupes Tarpeia is on the wrong side of the hill.

The side towards the Forum and the *Vicus Jugarius* is now closely built over and its contour has been completely altered, but it is quite evident that it was once a steep cliff, probably quite as abrupt as the western side.

Few points in the topography of Rome have been so much disputed as the question of the relative positions of the *Arx* and the *Capitolium*, Canina and the Italian antiquaries[1] taking one view, and Bunsen with other able German writers the other. Now, however, the point may be regarded as practically settled, owing to a series of discoveries which have been made on the western peak. Apart from these, evidence from classical writings is not wanting to support the view that this

[1] The very able Roman antiquary, the Comm. Lanciani, accepts Bunsen's attribution of these names; see an interesting paper by him in the *Bull. Comm. Arch. Rom.* iii. 1875, p. 165.

western part of the hill is the *Capitolium; e.g.* Livy (xxxv. 21), mentions the fall, in 192 B.C., of a mass of rock from the *Capitolium* into the *Vicus Jugarius*, by which several people were killed. This road passed close under the *Capitolium*, while it is a long way from the other peak of the hill.

Again, steps are mentioned by Ovid, *Fast.* vi. 183, as leading from the *Temple of Concord* up to the *Temple of Juno Moneta*, which was on the *Arx* (see p. 209); this can only apply to a staircase on the eastern side.

The earliest Temple mentioned by any classical writer was built on the *Capitolium;* this was the Temple to *Jupiter Feretrius*, vowed by Romulus after hanging the *Spolia Opima*, taken from the defeated Acron, King of the Cœsinenses, on an oak which grew on the Capitolium, Liv. i. 10; Dionys. ii. 34. It may, however, be presumed that *Roma Quadrata*, from the date of its founding, possessed that joint Temple to Jupiter, Juno, and Minerva (*Tinia*, *Thalna*, and *Menrva*), which, according to the religious rites of the Etruscans, was erected in every new-built town. It was to this triad of Deities that the great Temple on the *Capitolium* was consecrated, though it is usually spoken of as the Temple of *Jupiter Capitolinus* alone. Its *cella* was divided into three chambers, each containing a statue of one of these deities; and from its combined antiquity, size, and magnificence, this may be regarded as the most important of all the Temples in Rome.[1] The original building was founded by Tarquinius Priscus, built by his son Tarquinius Superbus (Liv. i. 38 and 53), but not consecrated till after his expulsion from Rome, when it was solemnly dedicated by M. Horatius Pulvillus, Consul-Suffectus, in the year 509 B.C., Livy ii. 8,

[1] In the Cella of Minerva a bronze nail was driven into the wall once a year in the Ides of September, the anniversary of the dedication, as a sort of sacred calendar, Liv. vii. 3. This Temple was the goal of triumphal processions, and in front of it a solemn sacrifice was offered by the victorious general or emperor.

and iv. 51; Dionys. v. 35; Plutarch, *Poblic*, 15, and *Cor. In. Lat.* i. p. 487; Tac. *Hist.* iii. 72; Val. Max. v. 10.

The original Temple was built of peperino and hard tufa, stuccoed and painted; it was in the Etruscan style, with widely spaced columns and wooden architraves; its statues in the three Cellæ, and other sculpture in and on the pediment, were of painted terra-cotta, the usual material for Etruscan architectural sculpture.

The statue of Jupiter was modelled by Turianus, an Etruscan sculptor from Fregenæ, as was also the terra-cotta Quadriga which stood on the top of the pediment. According to another story, this Quadriga was made for Tarquinius Superbus at Veii; it was numbered among the seven sacred relics, on the preservation of which the welfare of Rome depended.[1]

The Temple was built on an enormous platform, partly constructed of the native tufa of which the hill itself is formed, and partly of *peperino;* this extended over the slope of the hill, making a lofty *podium;* ἐπὶ κρεπίδος ὑψηλῆς, as Dionysius says; and in consequence of its three Cellæ being set side by side, the Temple was nearly square in shape; it is described with some minuteness by Dionysius (iv. 61); and Vitruvius (iv. 7) gives a technical account of its proportions and details.[2] It is also mentioned by Vitruvius (iii. 3) as an example of *Arœostyle* (wide-spaced) intercolumniation, and as having *signa fictilia*, clay statues, *more Tuscanico* (*after the Etruscan fashion*). This ancient building survived the Gaulish invasion in 390 B.C., and lasted till the year 83 B.C., when it was burnt by an incendiary, probably some one of the faction of Marius. Its reconstruction was then begun by Sulla, on its old foundations

[1] The other six are said to have been the *needle of Cybele*, the *ashes of Orestes*, the *veil of Ilione*, the *sceptre of Priam*, the *Ancilia of Mars*, and (chief of all) the *Palladium;* see Pliny, viii. 65; xxviii. 4; and xxxv. 45; and Cancellieri, *Le sette cose fatali*, Roma, 1812.

[2] The Temple of Jupiter Capitolinus was taken by all writers on architecture as the typical example of the Tuscan style.

and plan, but with much increased magnificence both of material and design. The columns of its *Peristyle* were taken by Sulla from the Corinthian *Temple of Olympian Zeus*[1] in Athens (Pliny, xxxvi. 5); it was, however, left incomplete by Sulla, and finished by Q. Lutatius Catulus, who also appears to have rebuilt the so-called *Tabularium* of the Capitol, see p. 236. Augustus assisted in the restoration of the Temple, but the name of Catulus appeared alone on the frieze of the building. This second Temple lasted till 70 A.D.; when it was again burnt, with other buildings on the Capitoline Hill, during the attack of the rioters who were supporting Vitellius against Sabinus, Vespasian's brother; Suet. *Vit.* 15. Immediately on succeeding to the throne Vespasian began the rebuilding of the Temple with great enthusiasm, even labouring at clearing the site with his own hands—*τόν τε νεὼν τὸν ἐν Καπιτωλίῳ ἐυθὺς οἰκοδομεῖν ἤρξατο:* Dion Cass. lxvi. 10; Suet. *Vesp.* 8; Aur. Victor, *Cæs.* 9; and Tac. *Hist.* iv. 53. In this third Temple, which was consecrated in A.D. 71, the old plan was still, for religious reasons, strictly adhered to, but Vespasian was allowed by the priests to increase its height; Tac. *Hist.* iv. 53.

During the reign of Titus, in 80 A.D., the Temple was burnt again, for the third time, during a fire which raged for three days. It was rebuilt by Domitian, with greater splendour than ever, with Corinthian columns of Pentelic marble; Suet. *Dom.* 5; Dion Cass. lxvi. 24; and Plut. *Pobl.* 15. See two interesting inscriptions relating to this rebuilding in Henzen, *Acta Frat. Arval.* 91, 118.

The roof was covered with bronze tiles,[2] which were gilt; and, according to Plutarch, no less than $2\frac{1}{2}$ millions sterling

[1] The magnificent Corinthian columns of this Temple which still remain standing, are probably not earlier than the time of Hadrian, who did so much to embellish Athens, though the outer wall of the Peribolus may date from the time of the Pisistratidæ, sixth century B.C.

[2] The older Temple also had bronze tiles, see Pliny, *Hist. Nat.* xxxiii. 18.

were spent in the last rebuilding on the gilding alone of this Temple. Its three doors were covered with gold reliefs, which remained intact till about the year A.D. 390, when they were stripped off by Stilicho; see Zosim. v. 38. The gold-plated bronze tiles were partly taken from the roof by the Vandal Genseric in 455, Procop. *Bell. Vand.* i. 5; and the rest by Pope Honorius, who removed them in 630 to cover the roof of the Basilica of S. Peter: see Marliani, *Topog.* ii. 1. Many interesting representations of this triple Temple and its sculpture exist on coins and reliefs.

The pedimental sculpture is shown on a relief published in the *Ann. Inst.* 1851, p. 289. In the centre is Jupiter enthroned, with his feet on an eagle; on his left is Minerva, and on his right Juno; the angles of the *tympanum* or *aetos* are filled up by figures of Vulcan making armour, Ceres, and other deities. The whole front of the Temple is shown on two republican *denarii;* one of the *gens Volteia* has it as a *Tetrastyle* building, with three doors; another with the legend *Petilius Capitolinus* shows it as *Hexastyle.*[1] On a first brass of Vespasian and a second brass of Domitian it is *Hexastyle*, and the three statues of the deities are shown in front, though they were really of course within the three *Cellæ*. A bronze *medallion* of Hadrian shows the three statues only—in the centre Jupiter, with an eagle above his head; on his right Minerva, in helmet and armour; and on his left Juno, with outstretched hand.

A relief from the *Arch of Marcus Aurelius*, now on the stairs of the *Palazzo dei Conservatori*, has a good representation of the front of the Temple, though it is shown with only four columns. The three gold-plated doors of the Cellæ are repre-

[1] Representations of buildings on coins are usually treated in a very conventional way, and are no guide as to the number of columns on the front of a Temple, or anything except a very rough notion of its form. The statue within the *Cella* is frequently shown outside; and a statue is introduced even when there was none within, as in the case of the *Temple of Vesta.*

sented, and the sculpture in the pediment is shown with much minuteness, the three chief deities in the centre, and others on each side, very like the relief mentioned above. A richly

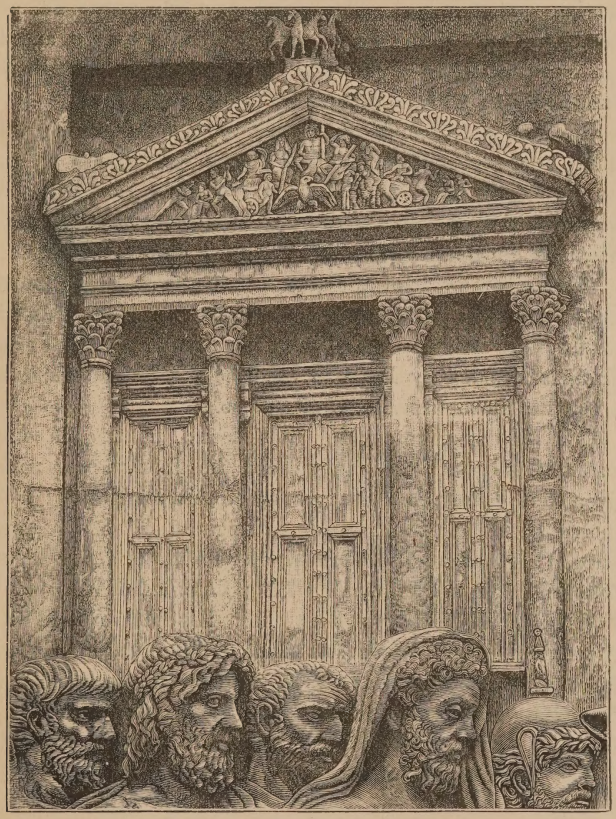

Fig. 25.

designed row of bronze *antifixæ* runs up the slope of the pediment; on its apex is a Quadriga, and there are remains of other groups at each angle of the gable. (See fig. 25.)

At various times, from 1835 to 1880, extensive remains

have been discovered under and near the Palazzo Caffarelli, on the western peak of the hill. These consist chiefly of a very large platform built of blocks of tufa, like those used in the Servian wall, forming a large *podium* on which the Temple stood; the full extent of this has not been discovered, and it has not therefore been possible to test the accuracy of Dionysius's description of the Temple (iv. 61).[1]

In 1875 part of an enormous drum of a fluted column was found upon this platform; it is nearly 7 feet in diameter, too large, that is, for any Capitoline Temple except that of *Jupiter Capitolinus;* and, moreover, this fragment is of Pentelic marble, the material used in the last rebuilding by Domitian.

By the south side of the large tufa platform, a small platform similarly constructed was discovered in 1875. This is possibly the foundation of the primitive *Temple of Jupiter Feretrius* founded by Romulus, and rebuilt by Augustus, as is recorded in the inscription of Ancyra.

The following inscription was found in the fifteenth century in the building usually called the *Tabularium*, a name given to it mainly on the authority of this inscription; it is quoted by Poggio of Florence, writing c. 1450, in his work titled, *De Fortunæ Varietatibus*—Q · LVTATIVS · CATVLVS · COS · SVBSTRVCTIONEM · ET · TABVLARIVM · EX · S · C · FACIENDVM · COERAVIT · EIDEMQVE · PROB · The Comm. Lanciani suggests (*Bull. Arch. Mun.* iii. p. 165 *seq.*) that the *Substructionem* mentioned in this inscription is the great platform of the *Temple of Jupiter Capitolinus*, though one would expect some distinct mention of the Temple if that were the case.[2] In any case the inscription is very

[1] See *Mon. Inst. Arch. Rom.* v. Tav. 36; and x. Tav. 30ª; *Ann. Inst.* 1851, p. 289; and *Bull. Comm. Arch. Mun.* iii. 1875, p. 165.

[2] Valuable accounts of the *Temple of Jupiter Capitolinus* are given by Hirt, *Der Capit. Jupiter Tempel, Abhandl. der Berl. Akad.* 1813; Niebuhr, *Rom. Gesch.* i. 55–58; Bunsen, *Besch.* 3A, 5–14; and Becker, *Handbuch*, i. p. 387.

vague and puzzling, the word *Tabularium* being also used without any explanatory qualification.[1] Catulus was Consul in the year 78 B.C., which gives the date of the above record.

The peak of this hill opposite to the *Capitolium* was called the *Arx* or Citadel, and on it stood a large temple to *Juno Moneta* or the *Adviser;* part of it was used as the mint, and hence *Moneta* came to mean *money;* Liv. vi. 20. It probably occupied the site of the present church or monastery of Ara Cœli, the floor of which is about 14 feet higher than the summit of the opposite peak.

The original *Temple of Juno Moneta* was founded by Camillus in 384 B.C., on the site of the house of the Sabine King Tatius; Liv. vi. 20; Plut. *Camil.* 36; and Ovid, *Fast.* vi. 183. It is this latter passage in which the close neighbourhood of the *Temple of Juno* to the great *Temple of Concord*, appears to be clearly established, showing that the *Arx* cannot have been on the opposite peak—

> "*Candida, te nives posuit lux proxima templo*
> *Qua fert sublimes alta Moneta gradus:*
> *Nunc bene prospicies Latiam, Concordia, turbam.*"

The steps mentioned are those which led from the Forum up to the "*Carcer imminens foro*," now called the Mamertine prison, and thence past the side of the *Temple of Concord* and the so-called *Tabularium* up to the *Temple of Juno Moneta* on the summit of the *Arx*, see Forum plate. The whole of this peak is covered by the church and monastery of Ara Cœli, and as yet no remains of the Temple of Juno have been discovered.

A large number of other temples and small shrines crowded the summit of the whole Capitoline Hill, which must, under the Empire, have been one enormous group of great architectural splendour, decorated with countless statues and other

[1] *Tabularium* was a generic name for a place where records were kept, and there were many in Rome.

works of art, both of Græco-Roman work, and spoils of the earlier art of Hellenic countries. Two of these temples were large enough to hold meetings of the Senate, namely, the *Temple of Fides*, founded by Numa and rebuilt in the first Punic war (Liv. i. 21; and Plut. *Num.* 16), and the *Temple of Honos and Virtus*, built by Marius (Cic. *Pro. Sext.* 54; and *De Divin.* i. 28). The latter was designed by the Roman architect C. Mutius, and is highly praised for the symmetry of the proportions of its Cella and columns by Vitruvius (vii. Præf. 17), who expresses a regret that it had not been built of marble; he mentions (iii. 2) that it was *peripteral*. An inscription quoted by Nardini, *Roma Antica*, Ed. Nibby, 1819, iii. p. 138, records that Marius built this temple out of spoils taken from the Teutons and Cimbrians; see also Orelli, *Inscrip.* 543.[1] Both these temples stood on the west or Capitolium peak. In the intermediate valley was an *Ædes Vejovis*, Aul. Gel. v. 12.

The positions of other and less important shrines on the Capitoline Hill is unknown; among them were *ædiculæ* dedicated to *Jupiter Custos*, *Venus Victrix*, *Venus Capitolina*, *Beneficium*, and *Ops*.

In commemoration of an escape from death by lightning, Augustus built a small temple to *Jupiter Tonans* near the great Temple of *Jupiter Capitolinus;* Suet. *Aug.* 29; and Pliny, *Hist. Nat.* xxxvi. 6;[2] the Ancyræan inscription records the building of this, and also that Augustus rebuilt the ancient Temple of *Jupiter Feretrius*.

On the opposite side, near the *Temple of Juno Moneta*, was

[1] Marius was obliged to build this Temple of very moderate height, in order that it might not be in the way of the augurs' observations from the *Auguraculum; Festus*, Ed. Müller, p. 322.

[2] *Jupiter Capitolinus* appeared in a dream to Augustus, and expressed jealousy of the Temple to *Jupiter Tonans;* upon which Augustus hung a bell on the shrine of the latter, and explained to *Jupiter Capitolinus* that *Jupiter Tonans* was only there as his doorkeeper.

a *Shrine to Concord*,[1] vowed, during a mutiny among his soldiers in Gaul, by the Prætor L. Manlius, in 215 B.C., and dedicated two years later; Liv. xxii. 33.

A triumphal arch in honour of Nero, which was erected on the Capitol, is shown on some of his coins.

One structure of great religious importance upon the *Arx* was the *Auguraculum*, an elevated platform from which the augurs observed the signs of the heavens (see Festus, Ed. Müller, p. 18); a custom dating from prehistoric Etruscan times. It appears to have been transferred by Augustus to the Palatine, and is mentioned in the *Notitia* under the name *Auguratorium*, see p. 86.

Chief among the crowd of statues on the Capitoline Hill was the colossal bronze statue of Apollo, 30 cubits high, brought from Apollonia in Pontus, by M. Lucullus, see Pliny, (*Hist. Nat.* xxxiv. 18, 1), who in the same chapter mentions a colossal statue of Hercules, set on the Capitol by Fabius Verrucosus; and a bronze colossal Jupiter erected by Sp. Carvilius out of the bronze armour taken as spoils from the Samnites; this statue was so large that Carvilius had a statue of himself made out of the waste bronze filings, and this latter small statue stood in Pliny's time before the feet of the colossus. He mentions also two busts, which were greatly admired, the work of the sculptors Chares and Decius, presented by the Consul P. Lentulus.

Among the most ancient were statues of all the kings of Rome, mentioned by Pliny, *Hist. Nat.* xxxiii. 4, in his discussion on the antiquity of the custom of wearing rings; he mentions that only two of the kings (Numa and Servius Tullius) were represented with rings.

In the *Cella of Juno*, in the *Temple of Jupiter Capitolinus*, was a wonderful statue in bronze of a dog licking its wound, which was valued so highly that a special official was appointed to guard it. This perished during the fire caused

[1] Another *ædicula* to Concord, made of bronze, existed near the Forum, see p. 213.

by the Vitellian rioters; see Pliny, *Hist. Nat.* xxxiv. 17, who says, cap. 19, that the statue of *Jupiter Tonans* was praiseworthy above all; see also xxxvi. 8.

At xxxv. 45, Pliny mentions the terra-cotta statue of Jupiter Capitolinus, dedicated by Tarquinius Priscus, as being a notable example of Etruscan Art, as well as the terra-cotta reliefs in the *tympanum*, and the quadriga on the apex of the pediment of the Temple; which were painted red, and the colouring renewed at regular intervals as it faded. There were also numerous pictures, the work of many of the great Greek painters; Pliny (*Hist. Nat.* xxxv. 36), mentions a picture of Theseus by Parrhasius; one of Proserpine carried away by Pluto, the work of Nicomachus, the son and pupil of Aristiacus; and a Victory, in a quadriga, painted by the same artist, which was dedicated by the Consul Plancus.

The first *myrrhine vases*[1] brought to Rome were dedicated on the Capitol by Pompey the Great, and there Livia Augusta offered the largest crystal cup ever seen in Rome; Pliny, *Hist. Nat.* xxxvii. 7 and 10.

Under the gold and ivory throne of Capitoline Jove was a store-place for a sacred reserve of gold, like the *Ærarium Sanctius* of Liv. xxvii. 10; this was used to buy off the Gauls after their capture of the greater part of Rome in 390 B.C., and was afterward plundered by C. Marius (Pliny, *Hist. Nat.* xxxiii. 5).

The Tabularium (so-called) occupies nearly the whole front of the *Asylum* or central depression in the Capitoline Hill, towards the Forum; this is in some respects the most interesting of the existing buildings of Rome, and much the most extensive and perfect example of Republican date. But little is known of its use or history; the most important document relating to it is the inscription quoted at p. 232, which records the building of a *Tabularium* by Q. Lutatius Catulus, Consul in the year 78 B.C., the same man whose name appeared as the rebuilder on the front of the Temple of *Capitoline Jupiter*

[1] See p. 17.

(Tac. *Hist.* iii. 72). The difficulty is that there were many *Tabularia* in Rome; see Liv. iii. 55; and xliii. 16; and Virgil, *Geor.* ii. 501, uses the word in the plural; nor have we any mention by any classical writer of a building in Rome which was known as *the Tabularium, par excellence.* Mommsen's attempt to show that this was the *Ærarium*, is contradicted by the many passages which show that the Public Treasury was in or adjoining the *Temple of Saturn* (see p. 167); in default of a better name *The Tabularium* is a convenient one to adopt, and certainly to some extent appears to be authorised by the above quoted inscription.

The building stands on the slope of the Capitoline Hill, the tufa rock of which is cut away to receive it. Its front, facing the Forum, reaches nearly to the foot of the hill, while its back, at a much higher level, faces on to the *Asylum*, or valley between the *Arx* and the *Capitolium.* The Forum front consists of an arcade with engaged Roman-Doric columns of *peperino*, having capitals and architrave of *travertine;* the rest of the entablature is missing. It is doubtful whether Poggio is right in saying that it had, in his time (the fifteenth century) another story above the existing arcade. Each bay of the arcade is vaulted with tufa concrete, once covered with stucco ornaments; only one of the arches is now open and visible outside, and it is mostly a modern restoration. One main entrance is from the *Clivus Capitolinus* at the south-west end of the building, a very fine specimen of masonry, with a flat arch nearly 17 feet in span, beautifully jointed. The external walls are of *peperino* with very accurately worked blocks, each exactly 4 Roman feet long by 2 wide and 2 thick, laid in alternate courses of headers and stretchers, with a very thin coat of pure lime mortar in all the joints—a very beautiful example of Republican *Emplecton* masonry. The inner walls are of similar blocks, but of *tufa* instead of *peperino*, or else of concrete made of broken tufa, pozzolana, and lime, in the usual early fashion, without any admixture of brick or travertine.

The opposite corner of the building has been destroyed, but there was evidently another entrance there, probably from the *gradus monetæ*, leading from the *Temple of Concord* to the *Arx;* this led into the open arcade of the *Tabularium*, which appears to have been a thoroughfare, so that foot-passengers could enter from one side and pass out at the other, from the *gradus monetæ* to the *Clivus Capitolinus*. A row of rooms opened into this public arcade, and at a higher level behind, facing on to the *Asylum* was a large hall, occupying the whole length of the *Tabularium*, with quadripartite vaulting supported on rows of piers. These piers, however, appear to be later in date than the time of Catulus, 78 B.C., but have been so much restored that it is very difficult now to judge of their age. At the back of the arcade, at the north-east end of the building, there is a well-preserved room, to which access is now given by some wooden stairs, through a doorway broken in the wall of the room; the original entrance was at the other end by a flight of travertine steps resting on tufa foundations, which still remain. This chamber was originally in two stories, but the intermediate concrete vaulting and floor are now gone, and only the stone springers of the barrel vault exist. In the middle of the floor of this room is the well-hole of a large staircase descending to the lower story. The steps and travertine curb round the well-hole are well preserved. The descent is easy, and the steps are varied, as was usually the fashion in Roman stairs when space allowed, by an intermediate inclined plane; thus diminishing the labour of the ascent (see plate of Forum).

A very massive flat arch supports the wall above, where the stairs pass under it; they then turn to the left and lead to a succession of small rooms, or rather a long passage under the arcade with windows, one in each bay, opening on to the Forum. This is all built of solid tufa masonry, faced outside with *peperino*, with vaults above of tufa concrete, supporting the road which runs along the upper arcade. The windows

were originally only 2 Roman feet wide, but have all been enlarged, except one. Behind this long passage is the solid tufa rock, so that there are no other rooms at this level. The front wall here is very massive, being 11 feet 3 inches thick, with a series of arched recesses or *embrasures*, into which the small windows opened,—mere rectangular apertures, 5 feet 6 inches high. This passage does not extend to the north-east end of the *Tabularium*, and its opposite end is now blocked up.

It appears to have had six bays with windows, each under the centre of an arch of the upper arcade, and then at this same level, a little beyond the place where the seventh window would come (counting from the staircase end) there is an archway, opening down to the original floor of the passage, which must have led out on to some building which does not now exist.[1] This may possibly have been a *Porticus of the Dii Consentes* earlier than that of Flavian times which now exists; the present *Porticus* blocked up the archway, but the earlier structure may have been lower, so that the archway led out on to its roof.

One of the most interesting features of the *Tabularium* is a very long and rather steep staircase of sixty-seven steps, without a break or landing, which leads from the outside of the building, at its lowest point towards the Forum, up to the great Hall facing on the *Asylum* at the back (see Forum plate). These stairs are partly cut through the rock of the hill, and have no communication with any other part of the building. The walls are of neat tufa masonry in 2 feet courses, like the rest of the building, and are vaulted over by a series of concrete barrel vaults, supported on massive tufa flat arches, set at regular intervals over the stairs, and following its rise.

The exit at the foot of the staircase was by a very beauti-

[1] This archway can be traced, though with difficulty, on the outside of the building; the vault of the first of the chambers of the XII Dii Consentes cuts across it; it is blocked up, and only two or three of its *voussoirs* exist.

fully jointed peperino doorway, with a flat arch of travertine, and over it a semi-circular relieving arch of peperino; see fig. 26. It seems probable that this was the point at which the Vitellian rioters, in A.D. 70, broke into the Capitol (Tac. *Hist.*

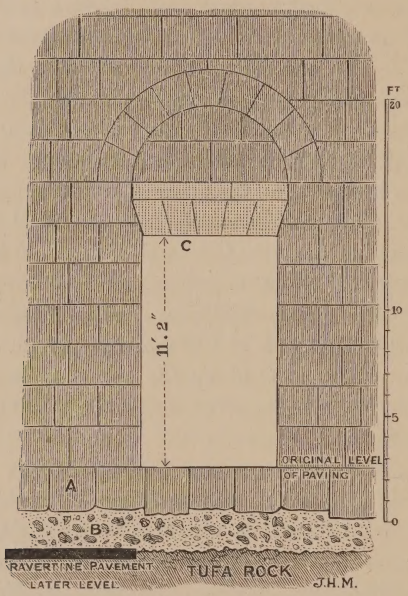

Fig. 26.

Example of Opus Quadratum, 78 B.C. Arch at foot of the Stairs of the Tabularium.

The flat arch C is of travertine, the rest of peperino.

A. Footing-course of rough stones.

B. Concrete foundation, exposed by the lowering of the paving when the Temple of Vespasian was built. Each block is 4 Roman feet long by 2 wide and 2 thick; a thin stratum of mortar is used.

iii. 71). When Domitian built the Temple of Vespasian he set it against the front wall of the *Tabularium* in such a way as completely to block up this doorway, and it was possibly about the same time that the Porticus of the XII gods was

rebuilt, which blocked up the other archway near this, but at the higher level.[1]

The noble mass of Republican masonry which forms this front wall is built *battering* or sloping on its outer face; that is to say, each course of *peperino* projects nearly an inch beyond the face of the course above. The foundations, of tufa concrete, are exposed near the Temple of Vespasian by the lowering of the pavement on each side of it. The fine layer of lime-mortar in all the joints of this wall is not thicker than stout paper, and is in no way intended to act as a holding cement or mortar, but simply to make the two adjacent surfaces of the blocks fit together with absolute completeness of contact.

Unfortunately, much damage has been done to this very interesting building during mediæval times, especially about 1300, in the reign of Pope Boniface VIII., and later by Nicholas V., when both angles towards the Forum were destroyed and the whole front built up to make it into a fortress, with towers at the corners. Inside much damage was done to the tufa walls behind the arcade by the place being made into a salt store—always a government monopoly—by which the soft tufa masonry and even the *peperino* have been seriously corroded.[2]

The Age of Augustus.

Before passing on to a description of the Imperial Fora

[1] The architectural effect of the Forum front of the *Tabularium* was wholly disregarded when the two lofty Temples of Concord and Vespasian were built against it. These buildings, when complete, blocked up and hid a great number of the open arches of the Doric arcade; that the older Temple of Concord was smaller than the existing one is shown by indications on the face of this wall, see p. 211.

[2] At present the arcade is used as a museum of architectural fragments, many of which are well worth study, especially the great entablatures of the *Temples of Concord* and *Vespasian*. See Righetti, *Descrizione del Campidoglio*, 1833; Azzurri, *L'Antico Tabulario*, 1839; Supham, *De Capitolio Romano*, 1866; Jordan, *Topogr. Roms*, and *Ann. Inst.* for 1881.

it may be well to give some account of the state of Rome immediately before the Christian era.

It had long before then very largely outgrown the limits of the Servian enclosure; in fact the most architecturally magnificent portion of Rome was then outside the ancient wall. This was the *Campus Martius*, originally called the *Ager Tarquiniorum*, from its owners the Tarquin kings, after whose expulsion it was known as the Field of Mars, from a prehistoric altar to that deity. The construction of several great *cloacæ* redeemed it from a marshy plain to firm ground. A long list of magnificent public buildings which stood here is given by Strabo, v. 3; who describes the *Campus Martius* as the most splendid quarter of Rome. This was owing to the fact that, being unincumbered with old houses and streets, there was nothing to hinder its being laid out with new streets, *porticus*, and open spaces, with much regularity and symmetry.

Three large theatres, an amphitheatre, many temples, the *Pantheon* and great *Thermæ of Agrippa*, the splendid group of buildings which were clustered round the *Porticus Octaviæ* and the great *Circus Flaminius* were some of its chief architectural splendours in the time of Augustus.

Outside the *Porta Capena*, and over the extensive Esquiline Hill, and in other directions, new and populous quarters of the city had extended beyond the limits of the regal walls. Moreover, up to the time of Augustus, there had been no *Regiones* added to the four primitive ones of Servius (see p. 60). Rome was then too powerful and too safe from external enemies to need a wall of fortification, but for political, social, and religious reasons, Augustus planned and carried out a complicated division of the whole intra-mural and extra-mural city into *Regiones* and *Vici*, each with its set of officials, both municipal and priestly. The main divisions were into fourteen *Regiones;* and each *Regio* was subdivided into *Vici* (or parishes), varying in number from seven in the smallest, the *Regio Cœlimontana*, to seventy-eight in the largest, the *Regio Transti-*

berina. Each *Vicus* formed a religious body with its *ædicula Larium* or *Compitalis;* and they were presided over by *Magistri vicorum,* the lowest in rank of the Roman magistrates.

A large body of police, who also combined the office of firemen, was organised; they were divided into seven *Cohortes vigilum* of a thousand men each, and each cohort was presided over by a *Præfectus Vigilum;* their barracks (*excubitoria*) were extensive and handsome buildings.[1]

A superior class of magistrates (*Curatores* and *Denunciatores*), chosen annually from the Tribunes, Ædiles, or Prætors, had the supervision of the *Regiones,* assisted by a number of subordinate officials.

The following is a list of the fourteen *Regiones* of Augustus:—[2]

I. PORTA CAPENA, extending beyond the fork of the *Via Appia* and *Latina,* as far probably as the later circuit wall of Aurelianus.[3] It was divided into ten *Vici.*

Principal buildings, etc., contained in Regio I.[4]—Two

[1] Many of these barracks have been recently discovered; the central depôt is under the Palazzo Savorelli; that of the second cohort on the Esquiline, near the (so-called) *Temple of Minerva Medica.* That of the third cohort was found in 1873, near the Baths of Diocletian; see *Bull. Comm. Arch. Mun.* 1873. The most perfect of all is the *excubitorium* of the seventh cohort, near the Church of S. Crisogono, in the Transtiberine quarter. It is a large building, richly decorated with mural paintings, mosaic floors, and marble linings; it contains a graceful little *lararium,* or Chapel of the Lares, with Corinthian columns. Many of the architectural details are of moulded terra-cotta, covered with stucco and coloured decoration; see Visconti, *Coorte VII de' Vigili,* 1867; and De Rossi, *Vigili,* in *Ann. Inst.* for 1858.

[2] The fourteen *Rioni* (a corruption of *Regiones*), into which Rome is still divided, in no way follow the ancient lines of these districts.

[3] It seems probable that the line of the great wall of Aurelianus was (partly at least) determined by the boundaries of the *Regiones* of Augustus being mostly planned so as to include the whole of these.

[4] Our chief knowledge of the contents and limits of each *Regio* is derived from the catalogues of the *Notitia* and *Curiosum,* two lists, vary-

Temples of Mars, the *sacred Grove* and *Spring of Egeria*, the *Sepulchre of the Scipios*, *Arches of Drusus*, *Trajan*, and *Lucius Verus*, the *Baths of Severus*, and the *Baths of Commodus*.

II. CÆLIMONTANA, including the Cælian hill.

Principal Contents.—The *Temple of Claudius*, the *Macellum Magnum* (great market of Nero), the *Caput Africæ*, the *Castra peregrina* (barracks of the foreign legion), the *Domus Vectiliana* (Palace of Commodus), *Temples of Bacchus and Faunus*. This is the smallest *Regio*, containing only seven *Vici*.

III. ISIS ET SERAPIS, contained eight *Vici*. It included the valley of the Colosseum, and the adjacent part of the Esquiline hill.

Principal Contents.—The *Flavian Amphitheatre*, the *Ludus Magnus*, the *Baths of Titus*, the *Baths of Trajan*, and the *Porticus Liviæ*. In the reign of Nero the greater part of this *Regio* was occupied by his *Golden House*. Its name was derived from *Ædiculæ to Isis and Serapis*.

IV. TEMPLUM PACIS, contained eight *Vici*. It included the *Velia*, most of the *Subura*, the *Fora of Vespasian and Nerva*, the *Sacra Via*, and buildings along the north-east side of the *Forum Magnum*.

Principal Contents.—The *Great Temple* and *Forum of Peace*, whence came its name; the *Temple of Pallas* and all *Nerva's Forum*, the *Temple of Romulus* and of *Jupiter Stator*, *the Templum Urbis Romæ*, Hadrian's *Temple of Venus Felix and Roma Aeterna*, the *Temple of Tellus*, the *Basilica of Constantine*, the *Basilica of Æmilius Paulus*, the *Vulcanal* and the *Sacra Via*, the *Meta Sudans* and the *Colossus of Nero*.

V. ESQUILINA, contained fifteen *Vici*, and included the northern part of the Esquiline, and the Viminal Hill.

ing slightly, which were drawn up in the fourth century. They are published by Preller, *Regionen der Stadt Rom.*, Jena, 1846; and by Nardini, *Roma Antica*, Ed. Nibby, 1818-20, whose work is arranged in the order of these lists. See also Uhlrich's *Codex Topogr. Urbis Romæ*, Würtzburg, 1871, and Jordan *Forma Urbis Romæ*, Berlin, 1875-38.

Principal Contents.—The *Nymphæum of Sev. Alexander*, the *Gardens* and *Villa of Mœcenas*, the *Amphitheatrum Castrense*, the *Barracks of the VIIth Cohors Vigilum*, the *Temple of Minerva Medica*, and the *Macellum Liviæ*.

VI. Alta Semita, contained seventeen *Vici*, and included the Quirinal Hill as far as the Prætorian Camp, afterwards included in the Wall of Aurelian.

Principal Contents.—The *Capitolium Vetus*, the *Temple of Venus* and the *Horti Sallustiani*, the *Baths of Diocletian* and of *Constantine*, the *Barracks of the IIId Cohors Vigilum*, a *Temple of Quirinus*, with a statue 20 feet high.

VII. Via Lata, contained (according to the *Notitia*) fifteen *Vici*. It was bounded on the west by the street called Via Lata (part of the modern Corso), which issued from the *Porta Ratumena* and skirted the Campus Martius, where, at the distance of about a third of a mile from the gate, it was continued northwards under the name of the *Via Flaminia*. A record of this main street is preserved in the title of the Church of *S. Maria in Via Lata* in the Corso. On the east this *Regio* extended to the foot of the Quirinal Hill.

Principal Contents.—The *Tomb of Poblicius Bibulus*, the *Campus* and *Septa Agrippæ*, the *Temple of the Sun*, the *Forum Suarium* (pig market), the *Arch of M. Aurelius* and *Lucius Verus*, and Temples of *Spes*, *Fortuna*, and *Quirinus*.

VIII. Forum Romanum, contained thirty-four *Vici*. It included not only the Forum, from which it took its name, but also the Fora of Julius Cæsar, Augustus, and Trajan, and the whole of the Capitoline Hill.

IX. Circus Flaminius, contained thirty-five *Vici*. It included the *Campus Martius*, and was bounded by the Capitoline Hill, the *Via Lata* and *Flaminia*, and the Tiber.

Principal Contents.—The *Forum Olitorium*, the *Theatres of Pompey*, *Marcellus*, *and Balbus*, *Amphitheatre of Statilius Taurus*, the *Pantheon* and *Baths* of *Agrippa*, the *Porticus Argonautarum*, the *Mausoleum of Augustus*, the *Porticus Octaviæ*, and various

Temples adjoining; the *Temples* and *Columns of Antoninus Pius* and *Marcus Aurelius*, the *Baths of Sev. Alexander;* the *Temple of Minerva Chalcidica* (built by Pompey), the *Iseum* and *Serapeum* adjoining it, and a large number of other magnificent buildings.

X. PALATINA, contained twenty *Vici.* It included the whole of the Palatine Hill. (See Chapters III. and IV.)

XI. CIRCUS MAXIMUS, contained eighteen *Vici.* It included the whole valley between the Aventine and the Palatine Hills, with the *Velabrum* and the *Forum Boarium;* being bounded on that side by the line of the Servian wall.

Principal Contents.—The *Circus Maximus*, the *Temples of Ceres* (*S. Maria in Cosmedin*), *Mercury* and *Hercules*, the *Arch of Constantine*, and the *Servian Porta Trigemina.*

XII. PISCINA PUBLICA, contained fourteen *Vici.* It included the space between the Cœlian and the Aventine, extending beyond the *Via Appia.*

Principal Contents.—The *Baths of Caracalla*, the *Barracks of the IVth Cohors Vigilum*, a *Villa of Hadrian*, and other buildings, of which little is known.

XIII. AVENTINA, contained seventeen *Vici.* It included the whole of the Aventine Hill, and its slopes down to the river.

Principal Contents. — *Temples of Diana, Minerva, Jupiter Libertatis*, and *Juno Regina*, the *Horrea Galbæ* (by the river), and the *Forum Pistorium* (bakers' market).

XIV. TRANSTIBERINA, contained seventy-eight *Vici*, and included the whole transpontine city, with the Janiculan and Vatican Hills, and also the island in the Tiber.

Principal Contents.—The *Circi of Caligula* and *Hadrian*, the *Mausoleum of Hadrian*, the *Barracks of the VIIth Cohors Vigilum*, the *Nemus Cæsarum*, the *horti Getæ*, and the Temple of *Æsculapius* and others on the Island.

Besides these important improvements in the internal organisation of the city, Augustus spent immense sums of

money in building and restoring the temples and other public buildings of Rome. Of the enormous extent of his benefactions to the city a most important record exists, engraved on the walls of a temple at Ancyra. For topographical purposes this is by far the most valuable of all existing Roman inscriptions.[1]

Ancyra was a city in the province of Galatia; more anciently it was included in Phrygia; it contained a Temple of Augustus (still existing), the walls of which are covered with large slabs of white marble, on which are engraved, in both Latin and Greek, a long list of the deeds of the Emperor Augustus. This inscription, commonly known as the *Monumentum Ancyranum*, is a copy of the sepulchral inscription at the *Mausoleum of Augustus* in the *Campus Martius* of Rome. Like all Roman sepulchral inscriptions it is divided into three sections; the first gives a list of the titles and honours which had been conferred on Augustus. The second part records his various gifts and acts of munificence, the buildings he restored or founded, the public spectacles he provided for the amusement of the Romans, and the precious offerings dedicated by him in the temples of the gods. The third section deals with his acts or *res gestæ*. The title of the whole is, "*Rerum gestarum Divi Augusti, quibus orbem terrarum imperio populi Romani subjecit, et impensarum quas in rempublicam populumque Romanum fecit, incisarum in duabus aheneis pilis, quæ sunt Romæ positæ, examplar subjectum.*" The two bronze pillars here mentioned, on which the original of this record was engraved, stood probably at the sides of the entrance to the *Mausoleum*.

The following is a list of the buildings in Rome recorded in the second part of this inscription to have been built or restored by Augustus:—*The Curia*[2] *and the Chalcidicum adjoin-*

[1] It has been published by both Zumpt and Mommsen; the latter's edition of 1883 has photographic facsimiles of the slabs.

[2] See p. 149.

ing it; the Temple of Apollo and its Porticus on the Palatine;[1] *the Temple of Divus Julius,*[2] *the Lupercal, the Porticus Octavia,*[3] *a pulvinar or state box at the Circus Maximus. Temples of Jupiter Feretrius*[4] *and Jupiter Tonans*[5] *on the Capitol; a Temple of Quirinus; Temples of Minerva, Juno Regina, and Jupiter Libertatis on the Aventine;*[6] *the Temple of the Lares on the Summa Sacra Via, and of the Dii Penates on the Velia;*[7] *a Temple of Juventas, and a temple of the Mater Magna (Cybele)*[8] *on the Palatine Hill.*

The Temple of Capitoline Jupiter,[9] *and the Theatre of Pompey "restored at a great expense without the inscription of my name." New springs of water collected, and the Aqueduct of the Aqua Marcia restored.*

"*The Forum Julium,*[10] *and the Basilica Julia,*[11] *both begun by my (adoptive) father (J. Cæsar), I completed, and the Basilica Julia I rebuilt, after it had been burnt, on an enlarged scale." These, the inscription records, though not finished during the life of Augustus, were completed by his heirs, in accordance with the provisions of his will.*

"*During my sixth Consulship* (28 B.C.)," *Augustus says,* "*I restored (refeci) eighty-two temples of the gods.*"

"*In my seventh Consulship* (27 B.C.) *I repaved at my own expense the Via Flaminia.*[12]

The Temple of Mars Ultor and the Forum Augustum he built on a site which he bought from private persons.[13] *The theatre by the Temple of Apollo he built in the name of his nephew Marcellus.*[14] *He offered precious gifts out of spoils of war in the Temples of*

[1] In this very brief way is recorded the construction of the magnificent group of buildings included in the *Area of Apollo;* see p. 105.

[2] See p. 178.

[3] Founded by Cn. Octavius; it must not be confounded with the *Porticus Octaviæ*, built by Augustus in honour of his sister.

[4] See p. 234. [5] See p. 234. [6] See p. 246. [7] See p. 135.
[8] See p. 91. [9] See p. 227. [10] See p. 252. [11] See p. 170.
[12] See p. 483. [13] See p. 256. [14] See p. 296.

Capitoline Jupiter, Divus Julius, Apollo Palatinus, Vesta, and Mars Ultor.

Then follows a list of the public spectacles provided for the people of Rome at the expense of Augustus.

Gladiatorial fights in his own name . . . times (the number is broken out of the slab), *and in his grandsons' and nephews' names five times, in which about* 10,000 *gladiators fought.*

Two contests (certamina) of athletes in his own name, and three in his nephews' names. Games (ludi) four times in his own name, and twenty-three times in that of other officials.

Fights with African beasts in the Circus Maximus, in the Forum, and in the Amphitheatre (of Statilius Taurus), in his own name and that of his grandsons and nephews twenty-six times; in which fights about 3500 *beasts were killed.*

Naval battles in the Naumachia[1] *in the Nemus Cæsarum across the Tiber, in which thirty beaked ships with three and four tiers of oars, and many other smaller ships were engaged, with about* 3000 *fighting men, besides the rowers.* The Naumachia was excavated in the ground, it was 1800 feet long and 1200 feet wide.

He also offered spoils of war in all the Temples of Achaia and Asia (Minor). The inscription then records *the melting of his* 80 *silver statues, and with the money golden gifts being offered in the Temple of Apollo Palatinus.*[2]

This wonderful catalogue gives some notion of the architectural splendour that was added to the city of Rome in the reign of Augustus. It must also be remembered that indirectly, by his example and encouragement, Augustus induced many rich citizens to spend enormous sums in the construction of magnificent public buildings, such as the Pantheon and Baths of Agrippa, the theatre of Balbus, and many others.[3]

The saying, recorded by Suetonius, of Augustus having turned Rome into a marble city[4] was certainly not without

[1] See p. 291. [2] See p. 107. [3] See p. 336. [4] See p. 11.

foundation. The old days of stern Republican simplicity suddenly came to an end under the auspices of Augustus, and the whole city, both in its public buildings and private houses, burst out, as it were, into a sudden blaze of splendour, glowing with the brilliance of richly veined marbles, poured into Rome from countless quarries in Africa, Greece, and Asia Minor.

One period only in the history of Rome can at all compare with the age of Augustus for its architectural activity; that was during the reign of Severus and his sons, a few years before and after 200 A.D. At that time, however, though Rome was even richer than during the reign of Augustus in quantity and variety of costly marbles, alabasters, and porphyries, yet purity of design and delicacy of workmanship had woefully fallen off, so that the large and numerous buildings which, with unflagging energy, were erected during the whole reign of Severus, can in no way have rivalled in artistic beauty those of the more polished and Hellenised age of Augustus. The following is a list of buildings in Rome founded anew or re-constructed during this second period of extraordinary architectural activity, between 196 and 215 A.D.[1]

The *Marcian Aqueduct*, restored and extended to the *Thermæ Severianæ*, A.D. 196.

The *Pœdagogium puerorum*, on the Cœlian Hill, A.D. 198.

The *Temple of Cybele* on the Palatine, rebuilt in A.D. 200.

The *Claudian Aqueduct* and that of the *Anio Novus*, restored in A.D. 201.

The *Theatre of Pompey*, the *Pantheon*, and *Thermæ of Agrippa*, the *Amphitheatrum Castrense*, and the *Prætorian Camp*, all restored in A.D. 202.

The great *Palace of Severus*, and the *Septizonium* on the Palatine, built in A.D. 203; and in the same year were restored

[1] See a valuable article by Comm. Lanciani, *Bull. Comm. Arch. Rom.* 1882.

the *Stadium of the Palatine*, the *Porticus Octaviæ*, and the whole *Forum Pacis* with its *Temples of Peace* and *Sacræ Urbis Romæ*.

In various years before A.D. 211, the *Temple of Vespasian* and the *Temple of Fortuna Muliebris*, *the Schola Scribarum*, the *Baths* near the transtiberine *Porta Septimiana*, the *Horti of Geta*, and a *Porticus* with sculpture of the deeds of *Divus Severus*, also across the river.

The *Antonine Aqueduct*, and the enormous *Baths of Caracalla*, between A.D. 212–215.

The devastation caused by the great fire in the reign of Commodus, A.D. 191, was one of the causes for these extensive reconstructions.

CHAPTER VIII.

THE IMPERIAL FORA.

Owing to its situation, and the already existing buildings which surrounded it, it was impossible to enlarge the *Forum Magnum*[1] so as in any way to keep up with the rapid growth of the population of Rome, and the increase of business both legal and commercial, so that towards the end of the Republic its space was very inadequate to the needs of the people.

In order, therefore, to meet the necessity for new law-courts, exchanges, and other requirements of law and commerce, one Forum after another was planned and carried out by the emperors of Rome. The *Forum Magnum* was further relieved from one of its early uses, that of a place of scenic spectacles and gladiatorial fights, by the construction of a number of theatres, amphitheatres, and other places of amusement, allowing of theatrical representations and scenes of butchery on a much larger scale, and got up with far greater splendour than was possible in the narrow limits of the area of the *Forum Magnum*, with its shaky rows of temporary wooden platforms and seats.

The Forum Julium.

The first of these additional Fora was that which was begun and in part completed by Julius Cæsar, from whom it

[1] The *Forum Magnum* was so named at an early period, and retained its old name, even after it had been far surpassed in size by the *Forum of Trajan*.

was called the *Forum Julium*. Its central area was partly occupied by a magnificent temple to *Venus Genitrix*, the mythical ancestress of the Julian Gens; this temple was vowed by Julius Cæsar at the Battle of Pharsalia, in 48 B.C.,

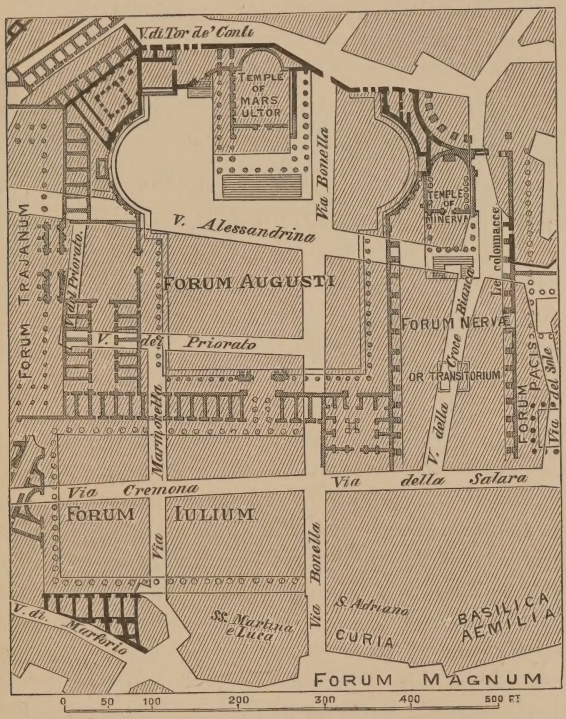

Fig. 27.

Plan of Fora of Julius, Augustus, and Nerva.

and the work was begun in the following year. The site chosen was a very crowded one, and the houses on it very valuable, owing to their neighbourhood to the great centre of Roman political and commercial life. Thus, in spite of the enormous sum spent in buying the ground, no less than 100

million sesterces, the site is said to have been somewhat cramped; Suet. *J. Cæs.* 26; Cic. *Ep. ad Att.* iv. 16; and Pliny, *Hist. Nat.* xxxvi. 24. The central temple was completed with wonderful rapidity, and consecrated at the time of Cæsar's triumphal entry into Rome in 46 B.C., though the statue of Venus in its *Cella* was not complete; this was the work of the Greek Arcesilaus; Pliny, *Hist. Nat.* xxxv. 45, Dion Cass. xliii. 22; and Plut. *Cæs.* 60. This temple is mentioned by Vitruvius (III. iii) as an example of *pycnostyle* (close) intercolumniation, like that built in honour of the deified Cæsar. It contained many works of art and other rich treasures; among them pictures of Ajax and Medea by Timomachus, Pliny, *Hist. Nat.* xxxv. 9; a breastplate covered with pearls from Britain, *ib.* ix. 35; and a collection of six sets of rings set with engraved gems, *ib.* xxxvii. 5.

In front of the temple stood an equestrian statue of Julius Cæsar, mounted on his favourite charger (Suet. *J. Cæs.* 61), it was of gilt bronze; Stat. *Silv.* I. i. 86.

That the Forum itself, that is, probably, the rows of arches and columns which surrounded the area, was not finished during Cæsar's life is shown by the passage from the Ancyræan inscription, quoted on p. 248, where its completion by Augustus is recorded. This Forum was specially intended for legal business, and the few existing vaulted chambers, with which, at least, one side of the area was lined, were probably offices for scribes and advocates. The scanty existing remains of these which are now visible, are to be seen in a small court which opens out of the west side of the Via Marmorelle, an alley which issues nearly opposite the *Mamertine prison.*

Remains of five arches exist above ground, each opening into a vaulted chamber, which is now mostly buried below the level of the ground; one or two of these have been excavated, and can be explored. They are built of massive tufa blocks, with vaults of tufa concrete. On the outside there are a number of holes by which marble linings were attached over

the whole wall and arches. Each archway is double, having a cambered flat arch, and over it a semi-circular "relieving arch." The springers and keystone of the flat arches are of travertine; the rest is of hard tufa, an interesting example of the Roman use of mixed hard and soft materials, see fig. 28.

From below the old level of these rooms, there are *Cloacæ* large enough to walk through, which run towards the

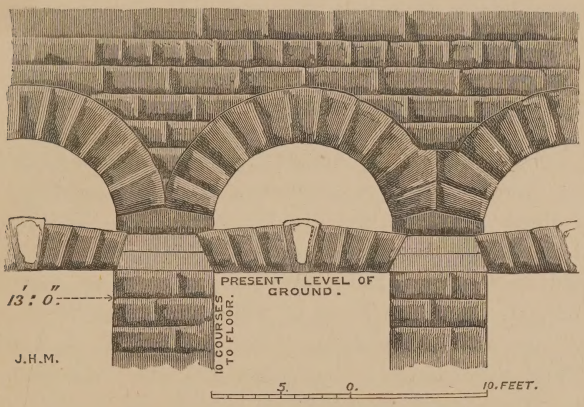

Fig. 28.

Part of the existing wall round the Forum Julium.
The key-stones and springers are travertine, the rest tufa.

"Mamertine prison, and then on into the great *Cloacæ*.[1] The large arches by which this row of rooms opened into the *Forum Julium* were probably once fitted with wooden doors and shutters, like those in the Forum of Trajan, see p. 276.

Palladio (*Architettura*, iv. 31) gives drawings of some fine

[1] There is not the slightest ground for Mr. J. H. Parker's notion that these chambers were part of the "Mamertine prison." They are at a considerable distance from it, and have no connection with it except through drains; they are manifestly a row of shops or offices; each has a large open archway for the sake of publicity, and nothing less like the rooms of a prison can possibly be imagined.

marble architectural fragments which were in his time found near this place; the marble frieze was enriched with reliefs of dolphins and tridents, very like those on part of the *Thermæ of Agrippa*, behind the Pantheon. The plan of this building, according to Palladio, was a *peripteral*, *hexastyle*, *pycknostyle* temple, and these facts, together with the position in which its remains were found, leave little doubt that it was the *Temple of Venus Genitrix*, in the centre of the *Forum Julium*.

Forum of Augustus.

The Forum built by Augustus, with its central *Temple to Mars Ultor*, was on the north-east side of the *Forum Julium*, and about equalled in size the *Forum Magnum*. The *Temple* and its surrounding area, enclosed with walls of immense height, were built in fulfilment of a vow made by Augustus in 42 B.C., before the battle of Philippi, which avenged the death of his adoptive father Julius; hence the dedication to Mars the Avenger: Suet. *Aug.* 29, and Ovid, *Fast.* v. 569. The Ancyræan inscription records IN · PRIVATO · SOLO · [EMP]TO · MARTIS · VLTORIS · TEMPLVM · FORVMQVE · AVGVSTVM · EX · [MANV]BIIS · FECI ·

The temple was dedicated in 2 B.C. (Vell. Paterc. ii. 100, 2); the surrounding Forum, like that of Julius, was mostly given up to legal business, and contained an important tribunal in which Augustus himself sometimes sat to hear causes: Dion Cass. lxviii. 10. The plan of this Forum is rectangular, see p. 253, with two large curved projections; its wall is nearly 100 feet high, and the lower stages were wholly covered inside with marble linings. A series of niches in the circuit wall, in several tiers, one above the other, contained an immense number of statues. One great series represented all the chief military leaders of the Romans, beginning with Æneas and Romulus, down to the time of Augustus himself; a series speci-

ally intended to honour those Romans who had built up, extended, and consolidated the great Empire of Rome.

Pliny mentions a number of antique works of art, which were collected in this Forum, two of the statues which once had supported Alexander the Great's tent, the other two being at the *Regia;* see *Hist. Nat.* xxxiv. 18. An ivory statue of Apollo, vii. 53; some elaborately worked iron cups (*scyphi*), xxxiv. 40; two pictures representing *War* and the *Triumph of Alexander*, and Victory by the side of Castor and Pollux, both painted by Apelles, xxxv. 36.

The Temple of Mars was specially appointed by Augustus as the place where the Senate were to meet to deliberate on the question, when it arose, of granting the honours of a triumph in order that the crowd of statues of victorious Roman generals might warn them not to be too lavish of the honour. Triumphant generals were to deposit here any standards that had been recovered from an enemy, and to dedicate their wreaths or crowns. In this temple the *toga virilis* was to be assumed by the sons of succeeding emperors; and a solemn farewell sacrifice was to be made to Mars Ultor by newly appointed governors of provinces, before setting out for their seat of office. A road passed on each side of the Temple of Mars towards the *Forum Magnum*, and across these Tiberius erected triumphal arches in honour of Germanicus and Drusus: Tac. *Ann.* ii. 64.

The existing remains of the great circuit wall of this Forum are among the most stately of the ruins of classical Rome, especially when examined from the slope of the Quirinal, near the foot of the *Marchione Tower*. This enormous wall, about 100 feet high, is divided into three stages by two simple string-courses of travertine. The utter absence of any ornament or even moulding on the outside of this great mass of masonry gives it an effect of much simple grandeur. It is built of *peperino*, in large blocks, roughly 2 Roman feet thick, and 2 wide, but varying from 5 to nearly 7 feet in length.

The upper story is built of a softer greenish sort of peperino (*Lapis Albanus*), which has weathered badly; and the lower parts of the very hard gray peperino (*Lapis Gabinus*), now as fresh in surface as ever. The stones are left rough and bossy, and are draughted round the joints; no mortar is used, but the usual dovetail clamps fasten each block to the next.

Four well-jointed arched doorways are visible, though buried nearly to the springing; a fifth has been destroyed by a modern door into the Church of the Annunziata, which is built on the site of the *Temple of Mars*.

At the east angle of the Forum the symmetry of the plan is spoilt by a piece of it being, as it were, cut off in a sloping direction. There must have been at this point a building which for some reason could not be pulled down and built over: Suet. *Aug.* 56, *Forum angustius fecit, non ausus extorquere possessoribus domos* — the circuit wall here makes a strange bend, and is built slightly curved inwards. At this point an important thoroughfare entered the Forum under a fine archway, which still exists under the name of the *Arco de' Pantani*. Its *voussoirs* are of immense blocks of *travertine*, tailing in with the *peperino* courses of the wall; a great part of the wall, over the arch, was stolen in the Middle Ages for building materials,[1] together with all the rest of the *peribolus*, except this one end, and a bit of the south-west side adjoining.

The interior of the Forum must have been a most striking contrast to the aspect of the outside. There, instead of roughly hewn blocks of dark gray peperino, all was lined with polished marble of dazzling whiteness, or *opus albarium* decorated with

[1] A simple but stately late sixteenth century Palace adjoined the remains of this great wall, a little farther to the south-east. Its facade was built wholly of blocks of *peperino* taken from the Forum of Augustus; this palace, in its turn, has been destroyed, and replaced in 1884 by a "Jerry building" covered with stucco, such as are now springing up by hundreds in Rome.

brilliant painting, varied with columns of *pavonazetto giallo*, and other foreign marbles of rich colour and markings.

The small part that still remains of the *Temple of Mars Ultor*, gives some notion of what its complete beauty must have been. Three Corinthian columns are still standing, and a pilaster fitted against the *peperino* circuit wall, all of Luna marble, and of the finest workmanship. Over these columns the architrave still remains, and the coffered marble ceiling of the *peristyle* is here well preserved, with its richly moulded sunk coffers (*lacunaria*) and central rosette in each.

The *Cella* wall is of peperino lined with thin slabs of Greek marble, with intermediate bands of solid marble blocks, tailing into the wall. The plinth is richly moulded, and the lower part of the *Cella* has a tall dado, with grooves sunk into the marble like sham joints, a device very successfully employed by the Romans to give increased appearance of size to their buildings.[1]

On the top of the circuit wall, projecting on the inside of the Forum, there was a large and effective *travertine* cornice, 4 feet deep, with large simple consoles; the upper part of the *peperino* wall, on the inside, appears to have been covered with hard white stucco, while the lower was cased with marbles, and rows of columns.

Close by the Arco de' Pantani, there are marks, on the inside of the Forum wall, of a low building with gabled roof, which abutted against it; holes for the wooden beams of this roof are cut in the *peperino* wall. This is the best preserved part of the circuit wall; several of the niches which surrounded it can be seen inside a mason's shed, which is now built against it. The greater part of the existing wall cannot now be ex-

[1] Nothing dwarfs a building more than its being faced with very large blocks, so additional false joints were added in order to restore its true scale. This is skilfully done in the fine travertine facing of the Tomb of Cecilia Metella, and in other buildings of a good period, such as the circular Temple in the *Forum Boarium*.

amined inside, owing to a nunnery being built against it, into which it is difficult to gain admittance.

In the sixteenth century this Forum was very much more complete than it is now; drawings of its plan and section, with details of the Temple, are published in Palladio's *Architettura*, lib. iv.; and by Gamucci, *Ant. di Roma.* These show the Temple of Mars as being *Octastyle*, with nine columns and a pilaster on the sides[1]; the end of the *Cella* is apsidal, like the Temples of Venus and Rome, and several others.

The next in date was the *Forum Pacis*, built to enclose the large and magnificent *Temple of Peace* founded by Vespasian; Martial, I. ii. 8; Suet. *Ves.* 9. It was on the south-east of the *Forum of Augustus*, but did not quite join it; a wide street from the *Subura* to the *Forum Magnum* being left between them. This narrow strip afterwards became the *Forum Transitorium* or *Palladium* of Nerva. Nothing now remains of the *Temple of Peace*, mentioned by Pliny (*Hist. Nat.* xxxvi. 24) as being one of the three most magnificent buildings in Rome.

It was dedicated by Vespasian in 75 A.D., having been begun four years before, immediately after the taking of Jerusalem, Dion Cass. lxvi. 15. Josephus (*Bell. Jud.* vii. 5, 7), gives an elaborate description of the splendours of the temple; in it were dedicated spoils from the Jewish Temple, including the gold candlestick, trumpets, and table of *prothesis*, which are represented in a relief on the Arch of Titus; cf. Herodian, i. 14; and Amm. Marc. xvi. 10. It contained countless works of art and objects of archæological interest, many of which are mentioned by Pliny. Among them a painting by Protogenes of the hero Ialysus, said to have been his masterpiece, during the execution of which the artist, according to Pliny, lived on steeped beans alone, so that a constant sense of

[1] The shortness of Roman Temples in proportion to their width is one of the chief points in which they differed from those of pure Greek style; peripteral Hellenic Temples had, as a rule, at least twice as many columns on the flanks as on the end.

hunger might render his feeling for beauty more keen; other no less absurd stories are told by Pliny (*Hist. Nat.* xxxv. 36) about this wonderful picture, namely, that it was painted four coats thick in order to be more durable, and that one of its chief beauties was the vivid representation of the froth at a dog's mouth, accidentally produced by the painter throwing his sponge at it in despair of getting the right effect.

The celebrated Colossus in the Vatican of the Nile, surrounded by sixteen children, representing the greatest number of cubits that the river rises, is a fine and probably contemporary copy in marble of a group in the *Temple of Peace* sculptured in the hard iron-coloured *basanites* (basalt) *Hist. Nat.* xxxvi. 11. The Vatican group was found in the time of Leo X. about 1516, on the site of the *Serapeum*, near the Church of S. Maria Sopra Minerva. A fine statue of the Argive Cheimon, a victorious Athlete, is mentioned by Pausanias, vi. 9, 3; and a statue of Ganymede by Juvenal, *Sat.* ix. 22.[1] Among the large collection of pictures in the *Temple of Peace*, Pliny (*Hist. Nat.* xxxv. 36) mentions one of Scylla by Nicomachus, and a noble painting of a Hero by Timanthes.[2] A public library in this Forum is mentioned by A. Gellius, v. 21, 9; this appears to have been a meeting-place for literary discussions and criticism; see Treb. Pollio, *Hist. Aug. Tyr. Trig.* 31.

In the reign of Commodus, in 191 A.D., a fire broke out in the *Temple of Peace*, and swept across the *Forum Magnum* to the Palatine: Dion Cass. lxxii. 24. Existing remains show that the *Forum of Peace* and the buildings it enclosed were restored in the reign of Sept. Severus. The most conspicuous of these

[1] According to Procopius, *Bell. Goth.* iv. 21, even in the sixth century statues by Phidias, Lysippus, and Myron, existed in the *Forum of Peace.*

[2] The ancient Greek paintings which were brought to Rome were not all easel pictures; even mural paintings on stucco were cut off their walls and fixed in wooden frames so as to be portable, see Pliny, *Hist. Nat.* xxxv. 45 and 49; and Vitr. ii. 8.

are a lofty and very massive wall of mixed blocks of *peperino* and *tufa*, left rough outside like those of the *Forum of Augustus*; this is opposite the north-west end of Constantine's Basilica, see fig. 29, No. 1. In it is a fine square-headed doorway of travertine, with a flat arch, and a semi-circular relieving arch over it; the *tympanum* being filled in with blocks of tufa. Both

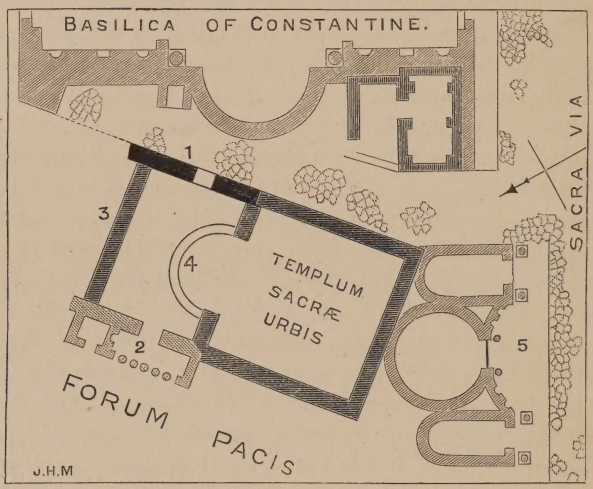

Fig. 29.

Group of Buildings by the Forum Pacis.

1. Existing wall of peperino and tufa, with travertine doorway.
2. Walls and porch, destroyed by Urban VIII.
3. Brick-faced wall of the time of Severus, against which the marble plan was fixed.
4. Apse built by Pope Felix IV., when he converted the Templum Sacræ Urbis into the Church of S.S. Cosmo e Damiano.
5. Temple of Romulus, built by his father Maxentius, made by Felix IV. into the porch of his church.

the arches and quoins of this doorway are of large blocks of travertine, in courses of irregular thickness, with which the tufa courses are made to range, the *pseudisodomon* of Vitruvius. The researches of Prof. Jordan and the Comm. Lanciani, have

shown that this archway opened into what was probably the *Templum Sacræ Urbis*, on the confines of Vespasian's Forum,[1] a sort of Municipal Record office, which also contained a plan of the whole city of Rome, covering one of the walls. The original plan in this building, made by order of Vespasian, was probably destroyed during the fire of Commodus's reign, which also ruined parts of the *Templum Urbis*. This was restored by Severus, not in *Opus quadratum* of stone as before, but with concrete faced with brick. The two end walls of this rebuilding still exist; that which faces on the *Sacra Via* is visible above the later circular *Temple of Romulus*, with five large round-headed windows high up, near the pediment. On the other end wall was fixed the great plan, engraved on slabs of white marble, of which many fragments now exist, and are preserved on the stairs of the Capitoline Museum.[2] The pieces were found at the foot of this wall, and the metal clamps by which they were attached to it still exist, showing the size and number of the complete marble slabs, which were fixed in nine tiers; the slabs averaged about 5 feet by 3 feet 6 inches. The whole have been published by Prof. Jordan, *Forum Urbis Romæ*, Berlin, 1875-82, a very valuable work, which also gives a plan of this building, and a drawing showing the position of the engraved slabs upon the wall.[3] The scale is about 1 to 300, but appears not to be quite uniform; the names of Severus and Caracalla, followed by the words AVGG · NN ·, show that

[1] See Jordan, *Topogr. Roms.*; Lanciani, *Bull. Comm. Arch. Rom.* for 1882; Tredelemburg, *Ann. Inst.* 1872, p. 66; and De Rossi, *Bull. Arch. Crist.* 1867, p. 62.

[2] The fragments which relate to the *Forum Magnum* are shown on the Forum plate. One piece, that of part of the *Temple of Castor*, with the stairs leading up to the *Nova Via*, was not found where the others were, and probably belongs to another similar plan. An account of the original discovery of the pieces is given by Vacca, writing in 1594; printed in Nardini, *Rom. Ant.* (Ed. Nibby), 1820, vol. iv. p. 5.

[3] This plan was probably partly copied from the much earlier one, made for Agrippa on the walls of the Porticus Pollæ.

it was made during their lifetime, probably at the same time as the restoration of the building.

Seventy-four of the 167 fragments found in the time of Pius IV. (1556-96) are now lost, but drawings of them by Bellori are preserved in the Vatican (*Cod. Vat.* 3439); these have been copied in marble, and are let into the walls of the Capitoline Museum, together with the genuine pieces. The copies, which are distinguished by a star, are not all very accurate.

In the sixteenth century much more than now exists remained of the original stone masonry of Vespasian's time; this is shown by Du Perac, *Vestigj di Roma*, 1575, and in a MS. of Ligorio, rather earlier in date, which is in the Vatican library (*Cod. Vat.* 3439).

Though having no connection with the *Forum of Peace*, it may be well here to complete the description of this group of buildings.

After the restoration by Severus, the *Templum Sacræ Urbis* appears to have been a large rectangular hall, with side walls of Vespasian's massive stone masonry, and end walls of brick-faced concrete. The whole interior was panelled in the usual way with polished Oriental marbles; on the side towards the inner area of the *Forum Pacis* was a projection like a porch, remains of which existed in the sixteenth century. At the end towards the *Forum Magnum*, the Emperor Maxentius added a circular Temple to his deified son Romulus, with a door opening from the *Sacra Via*, flanked by two curved projections (like an apse) and having on each side of these two Cipollino columns, supporting a white marble entablature; the walls were lined with marble, but this and the columns on one side have been removed; in other respects the building is in good preservation. The doorway is very handsome, being decorated with two red porphyry columns, supporting a very rich and beautiful carved entablature, taken from some earlier building; the surface enrichments on the mouldings of the

cornice are remarkable for their beauty both of design and workmanship, though rather over-loaded with ornament. The double bronze doors, also taken from some earlier building, are very interesting, as important specimens of Roman metal work of a good period. The hollow framing is cast in long lengths, with the usual *cyma recta* moulding round the panels; a further enrichment—the ball and reel ornament—has been added to the moulding separately, and fixed very skilfully by small dovetailed projections. The framing is also studded with enriched bosses, now mostly missing; in design this fine piece of Roman bronze work closely resembles the doors of the Pantheon—the only other example in Rome of bronze doors still *in situ*, and indeed the only ones that have always been in use in their original place; as the doors of the *Temple of Romulus* were refixed at a higher level in the end of the sixteenth century, and were only replaced in their old position a few years ago.[1]

The dome of the *Temple of Romulus* is well preserved; it had originally, like the Pantheon, an opening (*hypœthrum*) in the centre, which is now covered by a seventeenth century lantern.[2] The modern floor is far above the old pavement, and was raised when the whole Church beyond was remodelled in the debased style of the seventeenth century. Like the other buildings of Maxentius the *Temple of Romulus* was re-dedicated by Constantine, whose name, inscribed on the front, existed till the sixteenth century: see Ligorio's MS. *Sup. Cit.*

Felix IV., who was Pope from 526 to 530, converted the *Templum Urbis* and the adjoining *Templum Divi Romuli* into a

[1] Other equally fine ancient bronze doors, and of richer design, are those at the end of the Lateran Basilica, see p. 151; and one of the two bronze doors in the Lateran Baptistery, that given by Bishop Hilarus, appears to be ancient, but is of much later date and inferior workmanship; according to tradition it was taken from the Baths of Caracalla.

[2] This Temple is shown on a first brass of Maxentius with the legend—*Obv.* DIVO · ROMVLO · *Rev.* AETERNAE · MEMORIAE.

Church dedicated to S. S. Cosmas and Damian, as is recorded by Anastasius Bibliothecarius *Vita S. Felicis IV.* "*Hic* (Felix) *fecit Basilicam S. S. Cosmæ et Damiani . . . in via sacra, juxta Templum Urbis Romæ.*" This the Pope did by building a cross wall with an apse at the north-east end of the *Templum Urbis*, and the circular *Temple of Romulus* he converted into a sort of ante-church or porch, see fig. 29. The mosaics with which Felix IV. decorated the apse are perhaps the best preserved early Christian mosaics in Rome. In the sixth century the walls of the *Templum Urbis* appear still to have been lined inside with the polished marbles of Severus's restoration, and these were made use of in the Pope's Church, but unhappily the whole interior, except the mosaics of the apse, has been completely modernised in the seventeenth century.

The Forum of Nerva.

The narrow strip which remained between the *Forum Pacis* of Vespasian and the *Forum of Augustus* was soon occupied by another Forum begun by Domitian, and completed by Nerva, Suet. *Dom.* 5; Mart. *Ep.* I. ii. 8. It contained a Temple to Minerva (Pallas), and hence was also called the *Forum Palladium;* a third name for it was the *Forum Transitorium*, on account of its being an important thoroughfare from the *Carinæ* and the *Subura* to the *Forum Magnum.*

The *Temple of Minerva*, and the *Forum Palladium* were dedicated by Nerva in A.D. 97; but few references to either occur in classical writings. The Temple appears to have had a *Hexastyle prostyle* portico; as there was not width in the narrow space occupied by this Forum to allow of a *peristyle.* It had an apsidal-ended *Cella* like that of the *Temple of Mars Ultor;* a small piece of this apse, where it adjoins the outside of the wall of the *Forum of Augustus*, is the only part of this Temple that still exists; it is built of similar massive blocks of peperino, and the whole Forum was probably surrounded with a lofty

wall, marble-lined on the inside. A great part of the *Temple of Minerva* existed as late as the reign of Pope Paul V., who ruthlessly destroyed it in 1606, in order to use its materials, marble columns and linings, in the construction of the new Chapel of S. Paul in the Basilica of S. Maria Maggiore.

Du Perac in his *Vestigj*, and Palladio, *Arch.* iv. 8, show this temple and the Forum as they were in the middle of the sixteenth century. Four fine fluted Corinthian columns of the front were standing, and part of the pediment, with an inscription, which (when complete) probably ran thus—IMP · NERVA · CAESAR · AV[G · GERM ·] PONT · MAX · TRIB · POTEST · III · IMP · II[COS · II · P · P · AEDEM · MI]NERVAE · FECIT.

In the end wall of the Forum there was an archway, now destroyed, which was similar to the "*Arco de' Pantani*" of Augustus's Forum. One part, however, of the circuit wall of Nerva's Forum still exists to its full height, nearly 100 feet; it is the piece that adjoins the *Forum of Augustus*, with which it is built to correspond in height and appearance. On the side opposite the temple, another lower piece of the circuit wall exists, with its sumptuous architectural decorations, showing the great splendour with which the whole interior of the Forum was once lined. These are two Corinthian columns of Greek marble, now buried to about half their height; they stand free from the wall, the entablature on which projects and returns round them.[1] Above this heavy entablature, is a lofty attic with plinth and cornice of its own, and in the centre of the intercolumnar space is a good relief of Minerva, with helmet, ægis, spear and shield, about life size. The attic also projects over the columns, following the return of the main cornice, and these upper projections evidently formed pedestals for colossal statues.

[1] Breaking an entablature into projections over columns is a peculiarity of the somewhat debased taste of Roman architects, and never occurs in good Greek work.

The massive peperino wall once rose high above these architectural decorations, but its upper part was probably not lined with marble, as the lower part was. The facing slabs under the entablature are now stripped off, leaving the closely jointed masonry visible. Between the columns, but not exactly in the centre, is an archway which opened into the *Forum Pacis*, this has a square top with a flat arch, and above that a round relieving arch; the former is rather difficult to trace as it is partly cut away by a modern door-opening. The frieze of the order is richly decorated with sculptured reliefs, well designed and of excellent workmanship; these represent the various arts of life which were specially under the patronage of Minerva. Female figures are spinning or weaving tapestry at an upright loom; others are dyeing, washing, fulling, and weighing out money in scales. Other graceful figures are drawing water; a reclining figure of a youth with an urn, possibly represents the Anio; and the arches the Aqueduct which carried the *Anio Novus*.

A four-way arch, or temple dedicated to *Janus Quadrifons*, stood in the *Forum of Nerva*, at the intersection of the cross road from the *Forum Pacis* to the *Forum Augusti*, with the road from the *Subura* to the *Forum Magnum*. See Servius, *Ad Æn.* vii. 607; and Martial, *Ep.* x. 28, 6.

A graceful square Tuscan Temple, of which remains were found in the sixteenth century near the south-west end of the Forum Nervæ, is illustrated by Labacco, *Architettura*, Roma, 1558, p. 17; this may possibly be the temple of Janus Quadrifons.

The Emperor Severus Alexander set up in this Forum colossal bronze statues of those Roman emperors who had received the posthumous title of *Divus*, and by each was a bronze column inscribed with his *res gestæ;* Lamprid., *Hist. Aug. Sev. Alex.* 28.

The Forum of Trajan consisted of three parts, each of great size, namely the Forum proper or open area, secondly the

Basilica Ulpia, and thirdly the *Temple of Trajan* within a large colonnaded *peribolus*, see fig. 30. In order to form a level

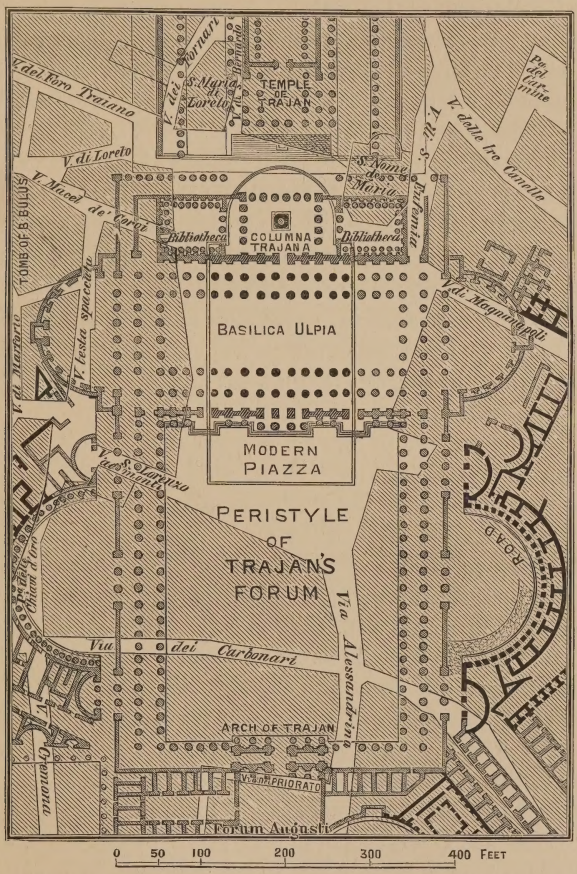

Fig. 30.
Forum of Trajan.

area for this enormous group of buildings a large ridge of tufa rock which united the Capitoline and Quirinal hills was cut

away and entirely removed, an engineering work of immense cost and expense of labour. What the original height of this great rocky spur of hill may have been it is now impossible to judge; the inscription on the pedestal of Trajan's column cannot be understood literally; according to it a mass of hill equal in height to the column (*i.e.* 100 Roman feet) was cut away—the inscription is SENATVS · POPVLVSQVE · ROMANVS · IMP · CAESARI · DIVI · NERVAE · F · NERVAE · TRAIANO · AVG · GERM · DACICO · PONTIF · MAXIMO · TRIB · POT · XV̄II · IMP · V̄I · P · P · AD · DECLARANDVM · QVANTAE · ALTITVDINIS · MONS · ET · LOCVS · TANT[IS · OPERI]BVS · SIT · EGESTVS.[1]

Brocchi (*Suolo di Roma*, p. 133) has shown from geological proof that the ridge can never have approached the height of 100 feet, and he suggests that the cliff was cut back in a slope to a point where the Quirinal was 100 feet high.

The Forum proper (see fig. 30) consisted of an enormous square *dipteral peristyle* or *porticus*, surrounded with a triple row of columns. On the south-east side it was approached from the *Forum of Augustus* by a very magnificent triumphal arch, surmounted by a bronze statue of Trajan in a six-horse chariot and six generals; it is shown on *Aurei* and other coins of Trajan; see Aul. Gell. xiii. 25, 2, and Amm. Marc. xvi. 10, and Dion Cass. lxviii. 29. The finely-sculptured reliefs which Constantine built into his arch came, partly at least, from the Arch of Trajan, and partly from other portions of Trajan's Forum. One side, that on the north-west, was occupied by the *Basilica Ulpia*, surrounded like the Forum, by a *dipteral peristyle*, two or more stories high, and probably open in the middle; it was similar in plan to the *Basilica Julia*, with the addition of a large Apse, which was built in a cutting made in the side of the Quirinal. On the north-west side of the *Basilica Ulpia* were two large libraries, and between them, in a

[1] Trajan received the *Tribunicial power* for the seventeenth time, in the year A.D. 114, which is the date of the dedication of his column.

court surrounded by columns, stood the *Columna Cochlis*, with its rich series of spiral reliefs. The other two sides of the Forum had each an enormous apsidal projection, with rows of shops and offices, several stories high. That on the north-east side is set against the cliff of the Quirinal, so that its upper stories were entered from the top of the hill. These were surmounted by gilt statues of horses and trophies of arms, with the subscription EX · MANVBIIS · Sidon. Apoll. *Carm.* viii. 8; Aul. Gell. xiii. 25, 1. Other statues in great numbers stood all round the colonnades of the *Peristyle;* in the reign of M. Aurelius statues were added of the Roman officers who fell in the war with the *Marcomanni.* The colonnades were roofed with gilt bronze, according to Pausanias, v. 12, 6, and x. 5, 11; and the columns of both the *Forum* and the *Basilica* were of Numidian *Giallo*, Phrygian *Pavonazetto*, and Egyptian red and gray granites; the rest of the building was of white Pentelic and Luna marbles.

The two libraries which formed part of the Basilica were divided, one for Greek the other for Latin MSS., like the libraries of the Palatine Apollo: Dion Cass. lxviii. 16.[1] Edicts and state papers appear to have been preserved there, Aul. Gell. xi. 17, 1; and the two libraries continued in use as late as the latter part of the fifth century; Sidon. Apollinaris (*Ep.* ix. 16; *Carm.* 25) mentions his own statue being set in the court between the two libraries, where the *Columna Cochlis* stands. The architect of these splendid buildings was the Greek Apollodorus of Damascus (Dion Cass. lxix. 4), who was also an able sculptor and engineer,[2] and designed many buildings both for Trajan and Hadrian. On the farther side of the Basilica stood a large *octastyle* temple, dedicated to Trajan by Hadrian with a *peribolus* surrounded with columns; founda-

[1] One of the libraries and the apsidal part of the Basilica is shown on the marble plan with the inscription BASIL · · · VLPIA ·

[2] In 103 A.D., Apollodorus built for Trajan the stone bridge over the Ister, near the modern town of Czernetz.

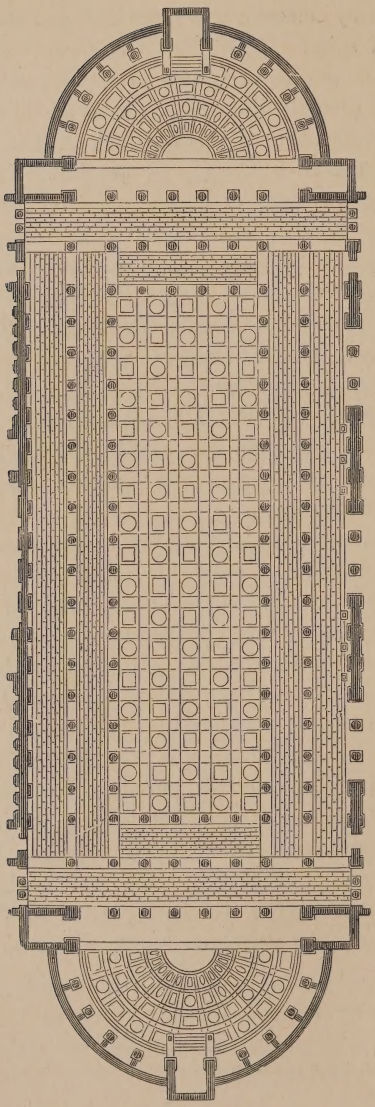

Fig. 31.
Ground-plan of Trajan's Basilica (*Basilica Ulpia.*)

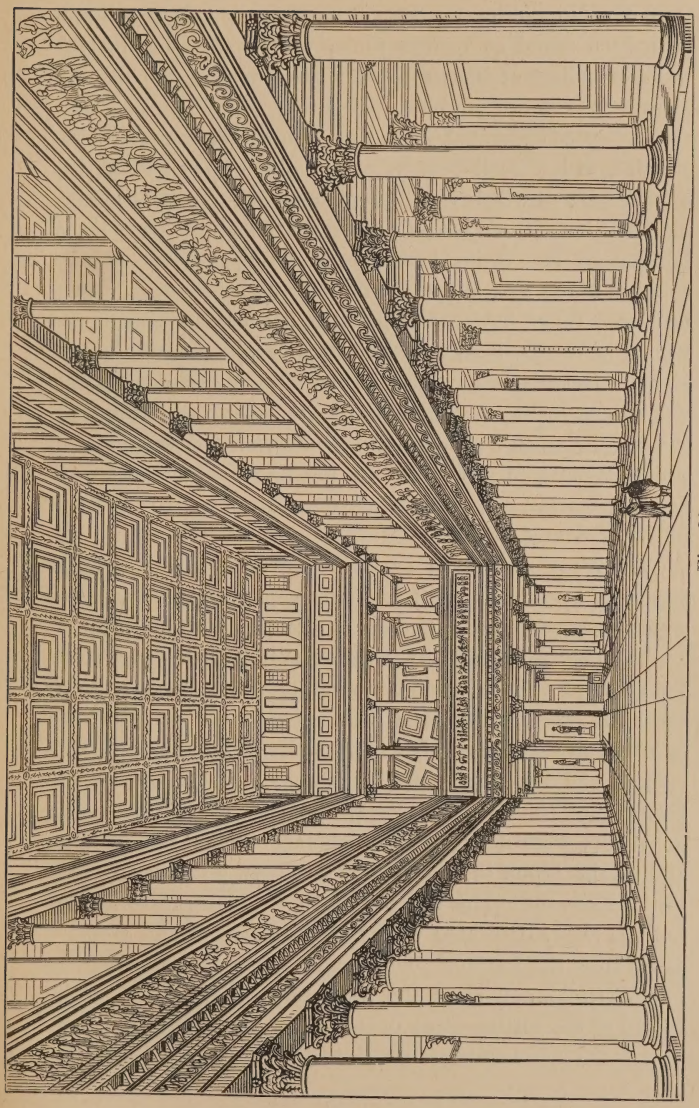

Fig. 32.
Interior view of Trajan's Basilica (*Basilica Ulpia*), as restored by Canina.

tions of this building and some of its immense granite columns have been found at various times, while excavating for the walls or cellars of houses on the north-west of the modern piazza; it is shown on coins of Hadrian.

The space excavated in the modern piazza is part of the Basilica, with a small portion of one side of the Forum, the greater part of which is still buried under several adjoining blocks of houses. What is visible has unhappily been much falsified by restoration, none of the stumps of the granite columns are *in situ*, and the whole result is thoroughly misleading. What, however, is genuine, is a great extent of the paving of the Basilica, with fine slabs of white marble, raised about 3 feet above the level of the adjoining Forum, which was approached by a long flight of steps, leading down from the Basilica, with a row of statues on each side; some of the pedestals of these still exist. A few fine Corinthian capitals of white marble, and other architectural fragments are lying in the excavated area.

There are also seven or eight much mutilated colossal statues of Dacian and other barbarian captives, similar to those which were taken hence and set on the arch of Constantine.

The *Columna Cochlis*, so called from its winding stairs like the spiral of a shell, is built of great blocks of Greek marble; the shaft, base, and capital (not counting the pedestal) are exactly 100 Roman feet high ($97\frac{1}{2}$ modern English), hence this column and the similar one of Marcus Aurelius were sometimes called *Columnæ Centenariæ*. Trajan's ashes, placed in a gold vase, were deposited in a chamber under the column; and on the top of the capital was a colossal gilt bronze statue of the Emperor. The tall pedestal on which the column is built is richly decorated with reliefs of armour and trophies taken from the Dacians. On one side is a tablet carried by two Victories, and on it the dedicatory inscription with the record of the cutting away of the hill. Under it is the doorway to the spiral staircase which is lighted by small slits. At

each angle of the *attic*, above the cornice of the pedestal, is an eagle supporting a garland of flowers.

The base of the shaft is simply a large *torus* covered with laurel leaves, forming a colossal wreath. The capital is of no order; but resembles a Doric capital, the *echinus* of which has been cut into egg and dart enrichments. Round the shaft are spiral bands of reliefs, arranged in twenty-three tiers, including more than 2500 figures, and a great number of background accessories, worked with great minuteness.

The sculptures represent the complete history of Trajan's two Dacian campaigns; they are full of dramatic vigour, and form a sort of Encyclopædia of Roman costume, arms, and military engineering, and methods of advance and attack by land and river, in open field, and against walled cities, with the most wonderful fertility of design and careful attention to detail. It is impossible to study the original reliefs with any closeness of attention owing to their lofty position;[1] casts however in the Villa de' Medici, Rome, are more available for close examination.[2]

A comparison of the column of Trajan, with that of Marcus Aurelius, is an instructive lesson on the effect that the size of the parts has on the apparent scale of the whole in architectural works. Both columns are exactly the same height (omitting the pedestals in both cases), that of Trajan is divided into twenty-three tiers of figures, while the column of M.

[1] When this column stood in a comparatively small *peristyle*, surrounded by lofty buildings several stories high, the sculptured subjects would not be so much wasted as they are now; but even making the utmost allowance for its former surroundings, it must be admitted that these spiral bas-reliefs are not strong in decorative effect, and involved an amount of labour quite out of proportion to their artistic result.

[2] Unfortunately the casts in the S. Kensington Museum are not put in a line near the eye, as they should be for purposes of study, but in two lengths, as if the column were broken in half, and thus they neither give the general effect of the whole nor allow the sculptures to be examined minutely.

Aurelius has larger figures, and only twenty tiers of them. The result is that the column of Trajan looks very considerably the taller of the two.[1]

The most interesting part of Trajan's Forum, which is now visible, is about half of the great curved line of rooms three stories high which are set against the side of the Quirinal Hill. A road, paved with the usual polygonal blocks of lava, follows the curve of this line of shops, which open on to it. Next to the bit of paving shown in fig. 15, p. 156, this is the best preserved piece of Roman road still visible in the city; unlike the other lava roads existing in Rome it does not appear to have been relaid during the period of decadence, but has the original paving of Trajan's time. On to it faces a row of small chambers, vaulted with concrete, covered inside with painted stucco, and paved with simple mosaic patterns in white and gray *tesseræ;* these open on to the street, with tall arches of concrete faced with brick, and the lower part of these arches is filled up by a massive door-frame (or *architrave*) of great blocks of *travertine*, with simple moulding round it, covered with stucco. The door-sill of each is a massive block of *travertine*, grooved to hold the wooden shop-front, and having a pivot-hole and a depression for the door to swing in; an arrangement like that in the Palace of Caligula, see p. 111, and many other places.

A uniform row of little chambers extends all round the curve, except where the stairs lead to the upper stories higher up the face of the hill. At the foot of the stairs there were wooden doors, fastened with a long hinged bar, with a bolt at the end of it. The holes for these and the marks made by its use can be traced in the jambs of the doorway. The first upper floor, about level with the modern ground line, has a

[1] As a rule the more horizontal subdivisions a structure has the higher it will appear; hence the many false joints cut in stone and marble facings by the Romans (see p. 259); and hence the difficulty of realising the true height of the Nave of S. Peter's, which is built in one gigantic order.

series of open arches, and engaged columns supporting an entablature. The capitals and bases of these half columns, and the moulded stringcourse below them, are of *travertine* covered with hard stucco of pounded marble; the rest is of concrete faced with brick; all of the brickwork is neat and close-jointed, even where it was covered with stucco, but at some places, such as the shafts of the engaged columns, it is of most remarkable beauty and neatness of jointing, numbering more than eight bricks to the foot.[1] The upper space, at the level of this open arcade, is occupied by a passage over the ground floor shops, and from it open a series of other chambers, with stairs at intervals leading to the second upper story, now mostly destroyed.

The Forum of Trajan and its surrounding buildings formed, during the Middle Ages, an almost inexhaustible quarry for marbles, used in countless churches and palaces of Rome; and worse still, supplied materials for burning into lime for many centuries, during the most architecturally degraded period of Roman history.[2]

In addition to the reliefs on the Arch of Constantine a few fragments of sculpture have escaped destruction; namely large half-length reliefs of Trajan and some senators, now in the Lateran Museum; two colossal horses' heads in a court near the Church of the S. S. Apostoli, and in the porch of this church a fine relief of an eagle with outspread wings, seated within a wreath, bound by graceful flowing ribbons.

The reliefs on Constantine's Arch are, from their beauty and

[1] Perhaps the beauty of this brick facing is only surpassed by one existing example in Rome—namely, an archway between two half Corinthian columns, which is built into the line of the Aurelian wall not far from the *Porta Latina* (see p. 495).

[2] During the ninth to the twelfth centuries, and even longer, architectural skill in Rome had sunk to so low a pitch that the beautiful marbles stolen from ancient buildings were not even made use of in other buildings, but were burnt into lime or broken up to make concrete.

fine state of preservation, among the finest existing specimens of Græco-Roman art, and though as late as the beginning of the second century show but little signs of that rapid decadence which was so shortly to begin. Many of these beautiful reliefs, especially the graceful sacrificial scenes arranged as circular medallions, show a strong survival of Hellenic skill and artistic taste but little marred by any Roman influence; in this respect very superior to the more purely Roman style, both in subject and treatment, of the spiral bands on the great column. On each front of the arch there are four circular medallions, and, in the *attic*, four rectangular reliefs, each complete in itself. There are also parts of a long frieze; representing an attack of the Roman cavalry, led by Trajan against the Dacians and their king Decebalus; the figure of the emperor appears more than once—in the thick of the fight, and again crowned by victory, with the Dacian chiefs making their submission to him. This fine frieze, with life-sized figures, taken probably from some long wall in the Forum or Basilica of Trajan, has been cut into short lengths and built into various parts of Constantine's arch. Two pieces are let into the *attic*, at the ends of the arch; and two are inserted in the jambs of the large central archway. The four pieces if put together would make one continuous design.[1]

The subjects of the other reliefs are as follows:—

North Side (towards the Colosseum) *Rectangular reliefs* in attic, beginning from the spectator's left.

No. I. The Emperor Trajan is received at the gates of the city by a stately helmeted female figure, the goddess *Roma*. In the background is an arched gateway, hung with flower garlands, and by it a *tetrastyle prostyle* Temple. These are probably the *Porta Capena*

[1] This is shown by Bellori in his *Veteres Arcus Augustorum;* pl. 42–5, a work of the sixteenth century, which is very valuable for its record of much that no longer exists; see also *Mon. Inst.* v. Tav. 30.

in the Servian wall and the *Temple of Mars*, which was just outside it, on the *Via Appia*.

No. II. Appears to be a scene outside the same gateway; a half-nude figure of a youth holding a wheel reclines on the ground, by him the emperor is standing looking down; behind is a man in civilian's dress, and on the right are armed men, one holding a horse.

This interesting relief records the construction or restoration of a paved road (*via munita* or *silice strata*) through the Pontine marshes, in A.D. 110; the reclining figure with the wheel is the usual Roman way of symbolising a road, and occurs on reverses of several coins of Trajan with the legend *Via Appia*. The civilian behind the emperor is probably the engineer of the road, perhaps the Greek Apollodorus; See Dion Cass. *Xiph.* lxviii. 15

No. III. Trajan surrounded by attendants is seated on a throne, raised on a lofty *suggestum* or platform; below are various standing figures, whom the emperor is addressing; among them is a female with a child. This apparently represents the same scene as one of those on the reliefs in the Forum, the institution in A.D. 99 of the charity for children of the poor; see p. 219. In the background is a building with a row of engaged columns, between which garlands are hung.

No. IV. The emperor enthroned on a *suggestum* receives the homage of a barbarian prince, probably Parthamasiris, King of Armenia, who was conquered in A.D. 115. Behind are a number of Roman soldiers bearing tall standards and eagles.

Medallions on North Side.

No. I. The emperor and two attendants on horseback are hunting a boar.

No. II. A very beautiful and gracefully composed relief,

skilfully designed to fill its circular space. Trajan stands pouring incense on to an altar in front of a statue of Apollo holding a tripod on a tall pedestal, behind which a laurel tree with graceful spreading branches forms a background to the upper part of the relief. One attendant stands behind the emperor, another on the right holds his horse.

No. III. The emperor with a number of attendants stand by the body of a lion, killed in the chase.

No. IV. Trajan with veiled head pours a libation on to an altar; two attendants stand by him. In the sky among clouds is a figure of Jupiter, and by him a small statue of Minerva; the precise meaning of this scene is not clear.

South Side; rectangular reliefs in the Attic.

No. I. (from the spectator's left). Trajan enthroned on a platform, in front of an arched building, receives a barbarian king.

No. II. Trajan, enthroned in the same way, receives a number of Dacian captives, with their king Decebalus, who are brought before him by Roman soldiers, some of whom carry tall standards.

No. III. An *allocutio* or address to the army by Trajan, standing on a platform.

No. IV. Trajan, surrounded by soldiers and standard-bearers, pours a libation on to a tripod altar; the three victims for the *Suovetaurilia*, a bull, a ram, and a boar, are being led forward to sacrifice.

Medallions on North Side.

No. I. Trajan, about to start on the chase, stands by his horse among attendants, one of whom, a beautiful youth leading a horse, has much resemblance in face

to Antinous, the deified favourite of the succeeding emperor, Hadrian.

No. II. The emperor offers sacrifice at an altar under a tree, in front of a statue of Hercules.

No. III. Trajan and attendants on horseback pursue a brown bear.

No. IV. The emperor pours a libation on to an altar, under a tree, in front of a statue of Diana.

In addition[1] to the five *Imperial Fora*, and the *Forum Magnum*, *Olitorium* and *Boarium* (oil and cattle markets), there were also smaller *Fora* or markets, namely that for pigs, *Forum Suarium;* for bread, *Forum Pistorum;* and for fish, *Forum Piscarium.* These are all mentioned in the Regionary Catalogues, together with some others, which were not really Fora, though popularly called so.

[1] For further details on the Forum of Trajan; see Fea, *Foro Trajano*, 1832; Richter, *Ristauro del Foro Trajano*, 1839. The reliefs on the column have frequently been engraved on copper in this and previous centuries; sets of these are sold at the *Calcografia Camerale (Regia);* see Fabretti, *Columna Trajana*, 1683; Bartoli, *Col. Trajan*, 1704; Pistolesi, *Col. Traj.*, 1846; De Rossi, *Col. Traj. designata;* and Frœhner, *La Colonne Trajane*, Paris, 1865; this last work has an excellent description of the reliefs and their subjects.

CHAPTER IX.

THEATRES AND OTHER PLACES OF PUBLIC AMUSEMENT.

It was not till the closing years of the Republic that permanent buildings of stone, specially designed for scenic shows, races, or gladiatorial fights were constructed in Rome. During the greater part of the Republican period the open spaces of the *Fora*, especially those of the *Forum Magnum* and *Forum Boarium*, were frequently used for fights and theatrical representations; temporary wooden screens and seats being erected for the occasion, and removed when the series of public amusements was over (see p. 146).[1] One part, however, of the city, the *Vallis Murcia*,[2] a long valley between the Palatine and Aventine hills, appears from a very early period to have been reserved as a place for races and other public spectacles, for which its natural form rendered it specially suitable. This was called, from its great size, the *Circus Maximus;* it was first fitted with rows of wooden seats by Tarquinius Priscus (Liv. i. 56; and Dionys. iii. 68), and these were frequently burnt and restored in the same material; restorations in 327 B.C. and 174 B.C., are mentioned by Livy, viii. 20; and xli. 27.

[1] In a similar way, till the end of the last century, bull-fights in Spain, even in large cities like Madrid and Seville, were held in the public squares or *plazas*, round which wooden fences and seats were temporarily erected.

[2] Its name was derived from an altar to the *Dea Murcia* (Venus), so called from the myrtle plants which grew there, according to Varro, *Lin. Lat.* v. 154; and Pliny, *Hist. Nat.* xv. 29; other derivations are given by other writers.

The valley of the *Circus Maximus* contained two altars of the most remote antiquity; one was the *Ara Maxima*, traditionally founded by Hercules or Evander; the other was the *Altar of Consus*, an Equestrian Neptune, in whose honour Romulus was fabled to have held here the *Consualia* or games at which the celebrated carrying off of the Sabine women took place. Varro, *Lin. Lat.* vi. 20. This latter altar, after the building of a permanent stone circus, stood on the *Spina;* it was usually covered, but during the sports was exposed to the view of the people; Plut. *Rom.* 14; and Tertull, *de Spect.* v. 8. Its position appears to have been at the opposite end of the *Spina* from the *Carceres* or starting-point; Tertullian speaks of it as being *ad primas metas;* and Tacitus mentions it as the first point after the *Ara Maxima* and the *Forum Boarium* in the line of the *Pomœrium* round *Roma Quadrata*. The earlier altar, *the Ara Maxima*, must have stood outside the *Carceres*, near the apse end of the Church of S. Maria in Cosmedin; see p. 46.

It was not till the reign of Julius Cæsar that any part of the ranges of seats were built of stone, and even then the upper tiers were again constructed of wood; Suet *J. Cæs.* 39. According to Livy (xxxiv. 54), till the year of the city 558 (196 B.C.), there was no distinction of classes in the occupation of the seats — plebeians and senators sat side by side. Augustus further developed the separation of classes in the *Circus Maximus*, and other places of public amusement; reserving the first tier for the senate, and special seats for soldiers, married plebeians, boys and their tutors,[1] women, and other classes; Suet. *Aug.* 44; see also caps. 43 and 45. The *Circus Maximus*, as described by Dionysius iii. 68, is the place as it was after its rebuilding by Julius Cæsar. Under the later emperors, especially Vespasian and Trajan, it was adorned with much greater magnificence.

[1] A fragment of an inscribed seat found in the Colosseum has on it . . . VERO . . . probably part of "*pædagogis pVERORum.*"

The plan of this and other Roman *Circi* was an adaptation of the Greek *Stadium*, such as the one at Messene and that outside Athens, remains of which still exist. The Roman Circus was, however, used for chariot and other horse-races, while the Greek *Stadium* was mainly intended for foot-races and other athletic sports.[1] At one end of the circus, that by the Forum Boarium, was a row of small vaulted chambers (*Carceres*), twelve in number, each large enough to hold a chariot and its horses, which before the start were imprisoned, each in one of the cells, hence called a *Carcer;* the whole group of chambers was called the *Oppidum;* Varro, *Lin. Lat.* v. 153.

The central part of the course was divided longitudinally by a long low wall called the *Spina;* at each end of which was one or more conical objects called the *Metæ*. The *Spina* was not set quite parallel to the sides of the circus, but inclined a little out of the central axis, so that there was more room at the start when the chariots were all crowded together. The curved line of the *Carceres* was also inclined a little to one side; its curve was part of a circle struck from a centre between the nearest *Meta* and the side of the circus, so that chariots in no special chambers of the *Oppidum* had any great advantage over the others at the start. In the Greek *Stadium* these slight deviations from regularity of line did not exist. Along the *Spina*, which was richly decorated with columns and statues, were set rows of marble dolphins and large marble eggs, which were arranged to move, so as to indicate in each race how many laps had been run;[2] according to Dion Cassius, xlix. 43, the dolphins and eggs were first put up in the reign of Augustus by M. Agrippa. Two sarcophagi in the

[1] A place, called a Hippodrome, was set apart by the Greeks for horse races.

[2] Seven laps were run as a rule, but occasionally they were reduced to five; Domitian increased the number of chariots which started together from four to six, but in later times the number was much greater.

Sala della Biga in the Vatican show a chariot-race of cupids in the Circus Maximus; its interior is minutely shown with triple *Metæ* at each end of the *Spina*, and on it statues of Apollo Helios, Cybele, Victory, a Quadriga, an obelisk, and various architectural decorations, a small *ædicula* or shrine, and an entablature supported by columns, on which seven dolphins are fixed; on another similar entablature rest seven eggs—one for each lap.[1] A bronze medallion of Gordianus III. also shows this interior. There is an obelisk in the middle of the *Spina*, and three conical *Metæ* at each end. Groups of gladiators are shown boxing and wrestling; see Grueber, *Roman Medals*, xli. 4; *Brit. Mus.* 1874. The spectators' seats sloped upwards, resting on raking vaults of concrete like those of the Colosseum; and tiers of columns at different levels supported ceilings over the people's heads.[2] The emperor's box or *pulvinar* was at one side of the *Carceres;* and at the starting end were tiers of galleries (*Mœniana*), which contained special seats of honour.

The outside of the circus, during its most magnificent period in the second century, had three tiers of arches and engaged columns very like those of the Colosseum, except that they were of white marble.

To continue the architectural history of the *Circus Maximus;* it was much injured (soon after its reconstruction by Julius Cæsar) by a fire, which in 31 B.C. completely destroyed all the upper wooden seats; Dion Cass. l. 10. It was restored by Augustus, who built himself a fine marble pulvinar, and set the great obelisk, now in the Piazza del Popolo, on the centre of the *Spina;* Suet. *Aug.* 43–5. Immense sums were spent by Augustus on shows and the slaughter of beasts in the *Circus*

[1] An interesting relief found at Foligno represents eight chariots racing in the circus, the *Carceres* with their wooden doors are shown, as well as the *Spina* and other details: See *Ann. Inst.* 1870, Tav. LM.

[2] The fall of some of these pillars and roofing in the reign of Antoninus Pius killed over 1000 people; *Chron. Vet. Ronc.* vol. ii. col. 244.

Maximus, no less than 3500 elephants were butchered there in the reign of Augustus alone, as is recorded in the Ancyræan inscription.

In 36 A.D. another fire destroyed part of the upper tiers of seats, those on the side of the Aventine; the circus was then restored and enlarged by Claudius, who rebuilt the *Carceres*, which were then of tufa, in marble, and gilded the *Metæ*; Tac. *Ann.* vi. 45; Suet. *Claud.* 21. After this restoration the circus held 250,000 spectators, Pliny, *Hist. Nat.* xxxvi. 24; in the time of Dionysius (iii. 68), after the rebuilding by Julius Cæsar, it had only held 150,000, showing that great additions must have been made to the upper tiers of seats and galleries; in the fourth century, according to the *Notitia, Regio* xi., it had been increased to contain 385,000 people.

In the reign of Domitian the last of the wooden seats were, after another fire, replaced by stone and marble, so that henceforth the building could not suffer from fire; additional splendour was added to the circus by Trajan, and in his time it must have been a structure of extraordinary size and magnificence, wholly covered inside and out with white marble, relieved with gold and painting, columns of coloured Oriental marbles, and statues of white marble and gilt bronze; see Pliny, *Panegr.* 51. Further size and splendour were added to the circus by Constantine; and Constantius his son set on the *Spina* another enormous obelisk, brought from Heliopolis; see Aur. Vict. *Cæs.* 40; and Amm. Marc. xvii. 4. The obelisk is now by the Lateran Basilica.[1]

The *Ludi Circenses* continued to be held in this circus as late as the sixth century, as is described in the letters of Cassiodorus, the able minister of the Gothic kings Odoacer and Theodoric. Soon after then it fell into disuse, and for many centuries supplied enormous stores of marble to feed

[1] One of the fragments of the marble plan shows part of the Circus Maximus, the semi-circular end towards the south-east; see Jordan, *For. Ur. Rom.*

the limekilns of the degraded city. In the sixteenth century some remains still existed of its external arcades, and a great part of the raking vaults of concrete, which had supported the marble seats along the side by the Palatine.[1] Now even these have disappeared; probably no great building of stone and marble has ever vanished from the face of the earth as completely as the Circus Maximus has done; and a great part of its site is now made hideous with large gas-works, pouring forth volumes of black smoke.

Partly under the Church of S. Anastasia (see No. 58 on fig. 10) recent excavations have exposed a series of very interesting buildings of many different dates, which appear to have skirted the edge of the *Circus Maximus* on the side towards the Palatine, and perhaps formed part of the circus itself. These are only partially exposed to sight, and the more ancient parts are so built over by later walls that it is impossible thoroughly to understand the existing remains.

Farther away from the circus, towards the Palatine, are a number of small square chambers, built of massive blocks of tufa, three to four feet long, and in courses (roughly) two Roman feet thick; the vaults of these rooms are of concrete made of tufa and pumice stone; their floors are nearly seven feet below those of the adjoining imperial rooms and the lava-paved road which skirts the circus; this road is about twenty-two feet below the present ground level. These very ancient tufa chambers seem to be built against an enormously thick tufa wall at the foot of the Palatine slopes, and probably once extended much higher up the hill. Partly over these tufa chambers, and extending along and over the paved road, which runs along the side of the circus, are a large series of lofty concrete and brick chambers, passages and staircases. A

[1] See Du Perac's *Vestigj*. The great sixteenth century oil-painting in the Museum of Mantua shows the end by the Carceres very complete in three orders; the lower two having open arches, very like those of the Colosseum.

row of rooms, all of the same shape and size, face on to the paved road, opening on to it with large double archways, both flat and semi-circular. This series of archways appears to be a restoration under the empire of an earlier Republican arcade, built of tufa, parts of which still exist, with capitals of travertine; the present arches, evidently restorations, are of brick-faced concrete of the first century A.D. Between two of these rooms a flight of travertine stairs leads up from the road to upper rooms in the direction of the Palatine. All these concrete brick-faced walls are of great strength and solidity, some as much as seven feet thick; the facing is very neat, with seven bricks to the foot. The long series of buildings, of which part is now visible, appears to have extended along the whole side of the circus, and it is probable that they formed part of the substructures under the upper rows of seats; without, however, more complete excavations it is impossible to be sure on this point. Some remains of massive travertine walls outside the apse of S. Maria in Cosmedin have been thought to be part of the *Carceres* end of the circus, but they are too far towards the river for that.

The *Circus of Maxentius* on the Via Appia, two miles from Rome, is sufficiently well preserved to show its original form, though it has been completely stripped of its marble seats and decorations. Till 1825 it was thought to be a circus built by Caracalla; but three inscriptions which were then found showed that it was dedicated in 311 A.D. in honour of Romulus, who died in 309 A.D., by his father Maxentius. One of the inscriptions (with breaks supplied) runs thus—
DIVO · ROMVLO · N · M · V · COS · ORD · II · FILIO · D · N · MAXENTII · INVICT · VIRI · ET · PERP · AVG · NIPOTI · T · DIVI · MAXIMIANI · SENIORIS · AC · BIS · AVGVSTI.

The greater part of the external wall is still standing; but the raking vaults on which the marble seats rested have nearly all fallen in. The walls are of concrete, faced with "*opus mixtum*," of alternate courses of brick and small blocks of tufa.

A number of large amphoræ are embedded in the vaulting and upper part of the walls; they were intended to diminish the weight of the vaults.[1] At the starting end, the lofty wall above the *oppidum* is very perfect, and the core of the *Spina* exists along its whole length, with the foundations of the *Metæ* at each end. The obelisk, now in the Piazza Navona, once stood here in the centre of the *Spina*.[2] The building of this circus by Maxentius "*ad Catacumbas*" is recorded in an early chronicle published by Roncalli, *Chron.* vol. ii. Col. 248; a large number of very extensive Catacombs are near the circus, namely those of S. Sebastian, S. Calixtus, and others.

Little or no visible remains now exist of the other great *Circi* of Rome. After the *Circus Maximus* the chief was the *Circus Flaminius*, which gave its name to the *Campus Flaminius*, an important portion of the *Campus Martius*, towards the Capitoline Hill.

The Circus Flaminius was founded by the Censor C. Flaminius Nepos, who fell at the battle of Lake Trasimenus in 217 B.C.; the same man had also in 220 B.C. constructed part of the great *Via Flaminia*, which skirted the *Campus Martius*, and passed out from Rome by the modern Porta del Popolo; Liv. *Epit.* xx.[3]

In the sixteenth century considerable remains of this circus were found while digging foundations for the *Palazzo Mattei*, and the tower now called *Citrangole* marks the position of the

[1] A notable instance of this method of constructing vaults exists at the *Tomb of S. Helena*, three miles outside the *Porta Labicana;* in its dome rings of pots (*pignatte*) are imbedded in order to lighten the thrust on the haunches; hence it is popularly called the *Torre Pignattara*. The dome of S. Vitale at Ravenna is a sixth century example of a similar use of pottery.

[2] See Nibby, "*Circo di Caracalla*," 1825; and Canina, *Rom. Ant.* i., p. 447, Tav. 137.

[3] Livy (xxiv. 43) records that *Ludi Scenici* were first instituted in 414 B.C. by the Ædile Tuditanus, who through his bravery had escaped from the slaughter at Cannæ.

Metæ at one end of the *Spina;* from this it was formerly known as the *Torre Metangole.* In the early mediæval period the long open space of this circus was used as a rope-walk, a record of which is preserved in the name of the Church of *S. Caterina dei funari.* The descriptions of the remains of this circus given by Fulvio, *Antiquaria Urbis*, Venice, 1527, and Ligorio, *Effigies Antiquæ Romæ*, Rome, 1561, are quoted by Nardini, *Roma Ant.* (Ed. Nibby, 1819), iii. p. 21.

The circus of Caligula and Nero was in the *Horti Agrippinæ*, at the base of the Vatican Hill; Suet. *Claud.* 21; Pliny, *Hist. Nat.* xxxvi. 15; part of the Basilica of S. Peter, and especially the great sacristy on the south side, stand over its site. The great obelisk, now in the Piazza of S. Peter, stood on its *Spina*, and remained standing *in situ* till it was moved by the architect Fontana to its present position in the reign of Sixtus V. An interesting and well illustrated description of the methods employed to move this enormous monolith was published by Fontana, *Trasportazione dell' obelisco Vaticano*, 1590.

The great circus built by Hadrian lay to the north-west of his mausoleum; nothing of it is now visible, but part of its remains were excavated in 1743; see *Atti della Pontif. Accad.* 1839.

The modern *Piazza Navona* (a corruption of *Agonale*) marks by its line of houses the area of the *Stadium* built by Domitian (Suet. *Dom.* 5) and restored by Severus Alexander under the name of the *Stadium Alexandrinum* (*Hist. Aug. Sev. Alex.* 24). Remains of its substructures exist under all the houses round the Piazza, and especially below the Church of S. Agnese. The line of the curved end is still partly marked by the curve of the houses at the northern end. Those over the starting end also mark the ancient line; they are set square with the sides, not in a slight diagonal line, as would be the case if the building had been a circus.

Few remains exist of the various *Naumachiæ*, which were

great reservoirs, surrounded by seats like an amphitheatre, and were constructed for holding naval fights. That built by Augustus was in the *Nemus Cæsarum*, on the transtiberine side of the river;[1] traces of it have recently been found. The position of the *Naumachia of Domitian* is unknown, as is also the reason of its being destroyed, apparently by Domitian himself, when its stone was used to restore the burnt wooden seats of the *Circus Maximus;* Suet. *Dom.* 5. Naval fights were also held in the *Stagna Neronis*, a great reservoir of water formed in Nero's *Golden House*, on the site now occupied by the Colosseum, see p. 302.

Theatres.—Till the middle of the first century B.C. no theatre in Rome was other than a temporary wooden building. During the Republican period a great prejudice existed against the construction of a theatre of stone, chiefly from a dread of introducing the luxurious habits of the Greeks. So strong was this feeling that Scipio Nasica induced the senate to pull down and sell the stone of a half finished theatre which had been begun by the Censor C. Cassius Longinus in 154 B.C.;[2] Liv. *Epit.* 48; Appian. *Bell.* Liv. i. 28. Even Pompey, who built the first stone theatre in 55 B.C., had to construct in it a temple to *Venus Victrix* in such a way that the stone seats and steps formed the access to the temple, so that the fact of their not being of wood might be excused.

The spirit though not the letter of this sumptuary law against Greek extravagance had been very completely ignored

[1] Augustus records in the Ancyræan inscription—*Navalis prœli spectaculum populo dedi trans Tiberim in quo loco nunc nemus est Cæsarum, cavato (solo in) longitudinem mille et octingentos pedes, in latitudinem (pedum mille et) ducent(um quo) triginta rostratæ naves, triremes (et quadrirem)es, pluris autem minores inter se conflixerunt. (In iis) classibus pugnaverunt præter remiges millia (hominum tri)a circiter.*

[2] "*Tanquam inutile et nociturum publicis moribus,*" were the words of the decree; the objection seems to have been not only to having stone seats, but having any seats at all, when it had hitherto been the custom for the spectators to stand.

three years earlier than this. A temporary wooden theatre, built by M. Æmilius Scaurus, during his Ædileship in 58 B.C., is described by Pliny (*Hist. Nat.* xxxvi. 2 and 24) as being a building of the greatest possible magnificence and costliness, containing seats for 80,000 spectators, an almost incredible number, only 7000 less than the number seated in the Colosseum. According to Pliny it was the greatest work ever produced by human hands, and though only a temporary building was constructed as if meant to last for ever.[1]

The *Scena* was divided into three orders, and had 360 marble columns; the lower order was of marble, the second "*e vitro*"; by this Pliny probably means that the wall was covered with mosaics of glass *tesseræ*; the third story was of gilt wood; bronze statues were set between the columns.[2] Pliny expresses his amazement that such splendour, and especially the 360 marble columns, should have been tolerated in a city which took it ill that one of the richest citizens of Rome (the Orator Crassus) should adorn his atrium with six columns of Hymettian marble. The fact, however, that it was not a private house but a building for the use and amusement of the people would make a great difference in the eyes of the fellow-citizens of Scaurus and Crassus.

Another temporary wooden building, built by C. Curio in 50 B.C., of even more incredible character, is described by Pliny (*Hist. Nat.* xxxvi. 24). This consisted of two very large theatres, built of wood, and made to swing on pivots, so that dramatic representations were given in the two theatres, and they were then swung round, so as to meet and form an amphitheatre, in which gladiatorial fights were held.

[1] As Pliny cannot have seen this wonderful building some allowance for the exaggerations of hearsay evidence must be made.

[2] This passage has been wrongly understood by Mr. J. H. Parker (*Colosseum*, p. 76) and others, who have taken the materials of the three orders of the *Scena* to refer to the columns.

The Theatre of Pompey was opened in 55 B.C., but was not completed till 52 B.C. Dion Cass. xxxix. 38; and Plut. *Pomp.* 52. It contained 40,000 people, and the seats and inner architectural decorations were of marble, the outer arches being of travertine, the vaults supporting the *Cunei* of concrete, the walls of travertine and peperino. This theatre is mentioned by Vitruvius, iii. 3, as "*the stone theatre*," *theatrum lapideum*, par excellence, either because it was the first one in Rome built of stone, or possibly the only one at the time when his work on architecture was written.[1] In this passage Vitruvius mentions a *temple of Equestrian Fortune*, in or by the theatre, and there were also near it *temples of Honos and Virtus* and *Felicitas*. The theatre of Pompey is said to have resembled the Greek Theatre at Mitylene, and was begun shortly after a visit there made by Pompey on the occasion of his defeat of Mithridates.

Considerable remains of this theatre still exist, but are almost wholly concealed by modern houses; the Via de' Chiavari follows the line of the *Scena*, and a great part of the foundations and substructures of the *Cavea* can be seen in many cellars in the houses in the Via de' Giubbonari and the Via del Paradiso, and especially under the Palazzo Pio.[2] The plan of the whole theatre is represented on one of the (now lost) fragments of the marble plan, and this shows that it cannot have been an exact copy of the Mitylene Theatre, as it presents the Roman peculiarity of having its *Cavea* confined within an exact semi-circle, while in the Greek theatre the *Cavea* occupied a segment which was more than half a circle.

[1] At the opening of the theatre there were fights with gladiators and beasts, in which 500 lions and twenty elephants were slaughtered.

[2] The radiating walls under the *Cunei* are partly of travertine and partly of peperino; the outside appears to have been wholly of travertine The name of the Church *S. Maria in grotta pinta*, is derived from the substructions of Pompey's theatre, which had painted decorations on their walls.

The *Scena* is shown on the plan to have had large recesses, and rows of closely set columns. The outer arcade, in its lower story at least, resembled that of the existing *Theatre of Marcellus*, having arches under an entablature supported by engaged Tuscan columns; part of this was found during excavations made in 1837. Outside the theatre, at the back of the *Scena*, was a very large and magnificent building supported by several parallel ranges of columns, forming a great *Porticus* or court, with an open area in the centre, planted with sycamore trees and decorated with fountains and rows of statues[1] in marble and gilt bronze. This *Porticus Pompeii* was also known as the *Hecatostylon* or "Hall of the hundred columns"; it is shown on three fragments of the marble plan, one of which is inscribed . . . TOSTYLVM. Adjoining the *Porticus* was the *Curia of Pompey*, an *exedra* or hall, with one side curved and furnished with tiers of seats. It was used for meetings of the Senate, and in it Cæsar was murdered at the foot of a colossal statue of Pompey, which stood in the centre; Plut. *Cæs.* 66; and *Brut.* 14; and Cic. *De Divin.* ii. 9, 23.[2] The *Curia* and *Porticus* also contained a number of fine Greek pictures, among them one by Pausias, and a painting of Cadmus and Europa by Antiphilos; Pliny, *Hist. Nat.* xxxv. 37 and 40.

During the furore of grief caused by the death of Cæsar the *Curia Pompeiana* was burnt, and the scene of the murder decreed to be a *locus sceleratus;* Appian. *Bell. Civ.* ii. 147; Suet. *J. Cæs.* 88. The statue of Pompey was saved from the fire, and was set by Augustus on a marble arch at the entrance to the *Porticus;* Suet. *Aug.* 31.

Pompey's private house was close by, a very modest and simple building (Plut. *Pom.* 40), contrasting strongly with the

[1] Martial, ii. 14, 9; iii. 19; Ov. *Ars*, i. 67; Cic. *De Fato*, c. 4.

[2] The colossal statue in the *Palazzo Spada* was found in 1553, under the Pal. della Cancellaria, and is supposed to be the one before which Cæsar fell; but there is little ground for this belief.

magnificence of the group of buildings which Pompey erected for the public use.

Like almost all the buildings of Rome, the Theatre of Pompey suffered frequently from fire. The *Ancyræan Inscription* records that it was restored at a great cost by Augustus, without the addition of his name to that of Pompey's on the front. POMPEIVM · THEATRVM . . . . IMPENSA · GRANDI · REFECI · SINE · VLLA · INSCRIPTIONE · NOMINIS · MEI.[1]

Another fire did much injury to the theatre in the reign of Tiberius, after which he rebuilt the *Scena*, and left the rest to be restored by Caligula, who put his own name in the place of Pompey's. The founder's name was restored by Claudius shortly after. Tac. *Ann.* iii. 72, and vi. 45; Suet. *Cal.* 21.

It was again burnt in the great fire of 80 A.D., and restored by Titus; further injury was done in fires during the reign of Philippus I., 249 A.D., and in that of Diocletian; after both of which it was restored, and the theatre continued in use till the time of Theodoric, and later in the sixth century.

A great part of the outer wall was standing as late as the sixteenth century, and is described by Fauno, Fulvio, Gamucci, and other Antiquaries of that century. Its existing remains are described by Canina; *Arch. Ant.* Sez. iii., Par. ii. p. 341.

A number of important statues have at different times been found in the neighbourhood of the theatre and Porticus of Pompey; among them one of the finest Greek statues known, found in the reign of Julius II.—the celebrated torso of

[1] The original inscription recorded that the theatre was completed in the third consulship of Pompey (52 B.C.), and the question arose whether it was more elegant to use the word TERTIVM or TERTIO; Cicero cautiously refused to commit himself to either opinion, and advised the contracted form TERT. to be used, so as to avoid the difficulty. The Emperor Claudius did not approve of the abbreviation and altered Tert. into III., Aul. Gell. x. i. 7 and 9. The form TERTIVM was adopted by Agrippa on the frieze of the Pantheon.

Hercules in the Vatican, signed as the work of Apollonios of Athens.

In 1864 a colossal statue of Hercules, fifteen feet high, in gilt bronze, was found carefully hidden in a small chamber underground near the theatre: it is chiefly remarkable for its size and preservation, not being of much merit as a work of art, and not earlier than the third century. It was bought by Pius IX. for £2000, and is now in the round hall of the Vatican.

Like other buildings in Rome this magnificent group for many centuries was used to feed limekilns, and as a quarry for stone and marble. From it Bramante got the columns of gray and red Egyptian granite, nearly fifty in number, which are round the Cortile, and at other places in the *Palazzo della Cancellaria.*

The Theatre of Marcellus was begun by J. Cæsar and finished in 13 B.C., by Augustus, who dedicated it in the name of his nephew Marcellus the son of Octavia, as is recorded in the *Ancyræan Inscription*—THEATRVM · AD · AEDEM · APOLLINIS · IN · SOLO · MAGNA · EX · PARTE · A · [PRIVATIS] EMPTO · FECI · QVOD · SVB · NOMINE · M · MARCELLI · GENERI · [ME]I · ESSET. See also Suet. *Aug.* 29.

The *Temple of Apollo*, here mentioned, was one of the most highly venerated and ancient in Rome; it was dedicated to the Delphic Apollo by C. Julius in 428 B.C., Liv. iv. 25. It contained a very sacred statue of Apollo carved in cedar wood, presented by Sosius, Prefect of Syria; Pliny, *Hist. Nat.* xiii. 5. From this statue it is called by Pliny the *Temple of Apollo Sosianus* (*Hist. Nat.* xxxvi. 4), and he mentions that it contained a celebrated set of statues representing the slaughter of Niobe's children by Apollo and Diana, the authorship of which was either due to Scopas or Praxiteles, but to which had been forgotten.[1]

[1] Many ancient copies of these fine statues still exist; one almost complete set is in the Uffizi at Florence; they appear to have been designed

The Theatre of Marcellus stands on the borders of the *Forum Olitorium;* this Forum was immediately outside the Servian wall, which separated it from the *Forum Boarium* inside the Servian enclosure.[1]

An earlier theatre, built by Æmilius Lepidus, existed on this site (Liv. xl. 51), but was probably pulled down by J. Cæsar when he founded the *Theatre of Marcellus.* The Temple of Pietas,[2] in the *Forum Olitorium,* was also pulled down to make room for it; Dionys. xliii. 49. The *Theatre of Marcellus* appears to have suffered in the fire which burnt the adjoining *Porticus Octaviæ,* and was restored by Vespasian; Suet. *Vesp.* 19.

It is thus mentioned in the Regionary Catalogues, *Regio* ix. *Theatrum Marcelli; capit loca* xxx *mil.* Judging from the size of its existing remains, it appears hardly possible that it can have contained as many as 30,000 spectators. Its *Scena* is shown on one of the fragments of the marble plan of Rome, with the inscription THEATRVM · MARCELLI.

In the Middle Ages the theatre was made into a fortified palace by Pietro Leone, in the year 1086, and was in the following century partly destroyed, and built upon by the Savelli family. Subsequently it became the property of the Orsini barons, who completed its disfigurement.

The existing remains of the *Theatre of Marcellus* are of great beauty and interest; little of the *Scena,* the side facing on the Tiber, now remains above ground; but a considerable

to fill the triangular *Ætos* of a pediment. A very fine multilated statue of one of the daughters, which is in the *Museo Chiaramonti* of the Vatican, may possibly be one of the original set.

[1] A large extent of the travertine paving of the *Forum Olitorium,* between the Piazza Montanara and S. Niccolo in Carcere, was discovered during excavations in 1875; see *Bull. Com. Arch. Mun.* iii. 1875.

[2] This temple was founded, according to Pliny (*Hist. Nat.* vii. sec. 121, and *Festus,* Ed. Müller, p. 209), to commemorate the oft-told and frequently painted story of the starving prisoner who was fed by milk from his daughter's breast. It was built by M. Acilius Glabrio, in 180 B.C., and contained the earliest gilt statue in Rome; Val. Max. ii. 5, 1.

extent of the arcading of the curved exterior is still standing, two stories high; the lower story is nearly half buried below the present ground level. The design consists of the usual arcades, with engaged columns supporting an entablature to each story. The lower order is Tuscan or Romanised Doric; the upper Ionic of very graceful proportion. It is all worked in travertine, once covered with the hard white stucco of pounded marble (*opus albarium*). The details are much more delicate and refined than those of the similar arcades in the Colosseum; and the volutes, and egg and dart moulding of the Ionic capitals are carefully worked, not left in the block as they are in the coarser Flavian building.[1]

Another very similar theatre was built by Balbus about the same time, and in the same quarter, as the *Theatre of Marcellus;* according to Suetonius (*Aug.* 29) it was one of the many buildings erected in Rome by private persons owing to the influence and exhortations of the Emperor Augustus, who was, above all things, anxious to increase the architectural splendour of Rome. In his time the last remaining Republican prejudices against magnificence and richness of material, even as applied to private houses, completely passed away.

The *Theatre of Cornelius Balbus* was built in 13 B.C., it stood a little to the north-west of the *Theatre of Marcellus*, and was placed with its curved part close to the Tiber bank. It

[1] The poverty of Roman architectural invention is strongly shown by the constant repetition, almost without variation, of this design with arches between engaged columns; even among the few existing (or till recently existing) remains, we find it over and over again—namely, in the arcade under the Campanile of S. S. Giovanni e Paolo; in the *Theatre of Pompey*, in the *Amphitheatrum Castrense*, in the *Basilica Julia*, in the front of the *Tabularium;* and (shown in the sixteenth century picture of Rome at Mantua) on the façades of the *Circus Maximus*, and the back of the *Basilica of Constantine.* It is a design which, when skilfully treated, is capable of great beauty of effect, and formed the favourite motive for the splendid courts and façades of the pseudo-classic of the sixteenth century.

appears to have been a building of great splendour, and according to Pliny (*Hist. Nat.* xxxvi. 12) was adorned with four wonderful little columns of Arabian *Onyx*[1]; Cf. Dion Cass. liv. 25. It appears to have been surrounded with open arcading, like that of the other theatres and amphitheatres of Rome. Two of the Tuscan engaged columns of this, with their entablature of travertine still exist, built into a house in the Via di S. Maria in Cacaberis, No. 23; and other parts of the theatre and its *Porticus* are visible in the neighbouring houses. Foundations and substructures of the *Cavea* exist below the Cenci Palace. At the back of the *Scena* was a covered hall, or *Crypto-porticus*, considerable remains of which existed in the sixteenth century, and were drawn by Serlio to illustrate his work on architecture.

According to the *Regionary Catalogue* (*Reg.* ix.) the *Theatrum Balbi* contained seats for more than 30,000 people; the writer of this erroneously says it was dedicated by Cæsar, and states that its name was derived from the adjacent *Crypta Balbi;* by this is evidently meant the *Crypto-porticus* which formed part of the building.

The colossal statues of Castor and Pollux leading their horses, now at the top of the Capitoline steps, were found by the Theatre of Balbus in about the year 1556.

[1] A variety of hard alabaster, not the modern Onyx (see p. 16).

CHAPTER X.

AMPHITHEATRES.

THE supposed origin of the amphitheatre, from the two wooden revolving theatres of C. Curio 50 B.C., has been mentioned above, see p. 292.

The first stone amphitheatre in Rome was that built by Statilius Taurus in the reign of Augustus; Suet. *Aug.* 2; Dion Cass. ii. 23 and lxii. 18. No remains of it are now visible, and its very site is uncertain; it probably stood in the *Campus Martius*, where the houses of modern Rome are the thickest; the elevation called *Monte Giordano* has been supposed to be caused by its ruins.[1]

The amphitheatre with its brutal scenes of butchery was unknown to the more refined and intellectual Greeks, and therefore this class of building cannot have been derived by the Romans from Hellenic sources, as was the case with their temples, *Porticus*, *Basilicæ*, and most of their other buildings. The question then arises whether it was a Roman invention, or derived from the Etruscans, from whom the Romans learnt the custom of having gladiatorial fights, and the even more horrible one of propitiating the gods by burying human victims alive.[2]

[1] The same has been said of *Monte Citorio*, another slight elevation, but it is known now that this is over the remains of the Temple of Marcus Aurelius.

[2] Livy (xxii. 57) mentions that in 216 B.C. a Gaulish man and woman and a Greek man and woman were buried alive in a stone chamber in the *Forum Boarium;* similar acts of human sacrifice were repeated on several occasions down to the first century A.D.

The existence of a fine stone amphitheatre in the ruins of the Etruscan city of Sutrium[1] has been supposed to be a proof of the Etruscan origin of this class of building. The seats, concentric corridors, and *vomitoria* of the Sutrium amphitheatre are to a great extent hewn in the solid rock, and this helps to give a look of great antiquity to the remains; but a careful examination of the details, and the mouldings especially, shows that this is really a purely Roman building, and most probably but little earlier than the Colosseum of Rome.

The fact is that the Roman amphitheatre is constructed on purely utilitarian principles, and any architectural beauty it may have is, as it were, accidental, and was not specially aimed at by the designer. In the æsthetic part of architecture the Romans showed little or no talent, seldom attempting more than to imitate and adapt the graceful buildings of the immeasurably more artistic Hellenic race; but as engineers and constructors of huge and complicated piles, perfectly and ingeniously adapted to their special uses, the Romans were quite unrivalled, not only in their mastery of the most difficult problems of construction, their skilful use of the most varied materials, their wonderful application of hydraulic laws shown in the complicated systems of lead pipes by which various parts and levels of buildings were supplied with water, but also in the complicated perfection of their arrangements for warming rooms and heating baths.

The peculiarities and merits which the Roman amphitheatre, considered as an elaborate architectural product, possesses, are precisely those of simple and straightforward provision for practical uses, which was the one strong point of the utilitarian Romans. No artistic invention was required; the decoration of the exterior with its series of colonnades, and the interior with its tiers of steps, were taken directly from the similar parts of the Græco-

[1] Sutrium is about thirty-three miles north of Rome, on the Via Cassia.

Roman Theatre. What was purely Roman was the ingenious arrangement of passages and staircases by which a crowd of eighty or ninety thousand people could rapidly, and without confusion, pour out of the *Colossea* of Capua or Rome.[1]

The Flavian Amphitheatre, or *Colosseum*, was built by Vespasian and Titus in the lowest part of the valley between the Cælian and Esquiline Hills, which was then occupied by a large artificial pool for naval fights (*Naumachia*).[2] This reservoir was in the middle of the *Golden House* of Nero—that gigantic palace which had swallowed up a whole district of Rome, and extended from the Palatine Hill, near the present Via di S. Bonaventura, to a distant point on the Esquiline, covering the whole intermediate slopes and valleys; see p. 347. Not even the horrible cruelties, or the mad pranks with which Nero degraded the purple seem to have aroused the indignation of the people of Rome to the extent that was caused by his arrogant extravagance in building the *Golden House*.

The destruction of this wonderful building, and the restoration to the Romans of its site in the form of public buildings, the *Thermæ of Titus* and the great amphitheatre, were among the most politic acts of the first Flavian emperors. The exact date of the commencement of the Colosseum is doubtful, but it was opened for use in A.D. 80; Suet. *Vesp.* 9, and *Tit.* 7.[3]

[1] These two amphitheatres are of about the same size; each was known in the Middle Ages by the name *Colosseum*, probably on account of its gigantic scale. It has been supposed that this name was given to the Roman Amphitheatre from its vicinity to the colossal statue of Nero, but this is hardly possible, as the bronze Colossus had been overthrown and melted long before the name *Colosseum* had been applied to the Flavian Amphitheatre. The word first occurs in the writings (eighth century) of the venerable Bede, who uses the form *Colyseus*.

[2] "*Hic ubi conspicui venerabilis amphitheatri*
Erigitur moles, stagna Neronis erant."—Martial, De Spec. Ep. ii.

[3] On the occasion of its opening 5000 wild beasts were brought into it to be slaughtered; so, at least, Suetonius states, *Tit.* 7.

An examination of the interior shows that it is of two distinct dates, with a considerable interval between. To the first period, a great part that is of the reigns of Vespasian, Titus, and Domitian, belong the three orders of open arches, and the internal structures up to the top of the arcades.

The highest tiers of seats inside, and the fourth story with a wall relieved by pilasters, are not earlier than the time of Severus Alexander and Gordianus III., in the first half of the third century. The junction of the work of those two periods can be clearly seen in the interior (see below, p. 320).

As built by the Flavian emperors[1] the upper galleries (*mœniani*)[2] were of wood, and these, as in the case of the *Circus Maximus*, at many times caught fire from lightning and other causes, and did much damage to the stone-work of the building. These two periods are recorded on the reverses of two groups of coins; the original building is shown on the *brasses* of Titus and Domitian, the latter dated 94 A.D., with (on one side of it) the Colonnade two orders high, which united the amphitheatre to the *Thermæ of Titus* on the Esquiline; and on the other the tall conical fountain popularly called the "*Meta Sudans.*" On these *reverses* the three tiers of arches are represented as they now exist, with a statue under each of the arches in the two upper stories. Over the wider arch which formed the Imperial entrance, there is a figure standing in a Quadriga; the other arches have single statues. Even on these earliest representations a fourth story is shown, with pilasters and windows or panels between them: this probably represents an original wooden order, or possibly it also was of

[1] Who the architect of the Colosseum was is unknown; the sepulchral inscription which was found in the Catacomb of S. Agnese, which has been popularly supposed to show that a Christian named Gaudentius was its architect, does not refer to the Colosseum at all, and does not even say that Gaudentius was an architect. The inscription is now in *S. Martino ai Monti*, see Nibby, *Rom. Ant.* i. p. 400.

[2] The older form of this word is *mœniana*.

stone, but, being injured by the burning of the upper tiers of wooden seats and galleries within, had to be rebuilt in the third century.

The amphitheatre is represented in perspective, so as to show the interior with its top tiers of galleries, and the stairs sloping up, which divided the ranges of step-like seats into *cunei* or wedge-shaped compartments. The emperor is represented in the centre, seated under an arch.

On no further coins is the Colosseum represented till we come to the second period, when its top story was rebuilt, as it now exists; probably following the design of the original fourth story of the Flavian emperors. It then held, according to the *Notitia*, 87,000 spectators.

It appears on reverses of first brasses of Severus Alexander (222 to 235), and on a large bronze medallion of Gordianus III. (238 to 244), neither of which unfortunately is dated by the number of the *Tribunicia potestas*. The legend on Gordian's medallion is MVNIFICENTIA·GORDIANI·AVG. On it is also shown the colossal statue of Nero.

The important restoration of Severus Alexander was begun by Heliogabalus, after a fire caused by lightning, on the 3d of August A.D. 217, in the reign of Macrinus; Dion Cass. lxxviii. 25; *Hist. Aug. Heliog.* 17, and *Sev. Alex.* 24. A less important restoration had been carried out in the previous century by Antoninus Pius; *Hist. Aug. Ant. Pius.* 8.

A subterranean passage was added by Commodus to connect the amphitheatre with his palace, *the Domus Vectiliana* on the Cælian; Commodus was passionately fond of the wholesale butchery of men and beasts in the Colosseum, and used himself to assist, showing his courage by killing beasts in cages, and shooting arrows from a safe place. Dion Cassius, an eye-witness, has given a vivid account of these scenes; lxxii. 17–22, see also *Hist. Aug. Commod.* II.

In the reign of Theodosius II. and Valentinianus, 442, great damage was done by an earthquake, and in 445 important

restorations were carried out to the Arena, the Podium, the entrances, and the seats. This is recorded on an inscription cut on a previously used block of Pentelic marble, which now lies near the entrance from the side towards the *Velia:* it states that Lampadius, the Præfect of the city, restored HARENAM · AMPHITHEATRI · A · NOVO · VNA · CVM · PO[DIO · ET · PORTIS . POSTI]CIS · SED · ET · REPARATIS · SPECTACVLI · GRADIBVS.[1] A very fragmentary inscription records a restoration by Messius Phœbus, between the years 467 and 472. Another very interesting and perfect inscription, recording a restoration after an earthquake, was discovered during the excavations of 1813; it runs thus—DECIVS · MARIVS · VENANTIVS · BASILIVS · V · C · ET · INL · PRAEF · VRB · PATRICIVS · CONSVL · ORDINARIVS · ARENAM · ET · PODIVM · QVAE · ABOMINANDI · TERRAEMOTVS · RVIN · PROSTRAVIT · SVMPTV · PROPRIO · RESTITVIT. This Basilius is possibly the consul of that name in 486; the amphitheatre continued in use during the sixth century, though the brutal slaughter of gladiators and prisoners had been put a stop to in the year 403, by the heroic self-devotion of an oriental monk named Telemachus, who came to Rome to protest against this cruel sport. He rushed into the midst of one of the scenes of butchery, and fell a victim to the rage of the people at having their favourite amusement interrupted. The moral effect of this noble act was, however, so strong, that henceforth human victims were no longer slaughtered in the *Arena;* see Theodoret, v. 26.

The tickets of admission to the Colosseum marked the exact seat the holder was to occupy, the number of the tier

[1] In an amphitheatre the word *Podium* has a special meaning, namely, the raised floor or platform which skirted the Arena, and was reserved as a place for the seats of the emperor's family, the Vestal Virgins, and a few of the highest officials of Rome. A valuable collection of inscriptions found in the Colosseum has been published by the Comm. Lanciani—*Iscrizioni dell'Anfiteatro Flavio*, Rome, 1880.

(*Mœnianus*), and the number of the *Cuneus* or department of the *Cavea;* so that there could be no mistake; and each external arch of the lower order was numbered, with the exception of the central arches towards the Cælian and Esquiline, by which the emperor entered, so that each ticket-holder could go straight to the stairs which led to his place. An existing ivory ticket for the amphitheatre of Frosinone has similar indications (see Mommsen in *Berl. Sachs Gesell.* 1849, S. 286), namely CVN · VI · IN · XVIII, that is "*the sixth Cuneus, lowest row, seat* No. 18." Certain fixed seats were reserved for the various officials, religious and political, and the different classes of the Roman people. On the *Podium* were the thrones of the emperor and his family, the Vestal Virgins, the Senators, the Pontifex Maximus, the Flamen Dialis, the Consuls, the Prætors, and a number of other officers of State. The disposition of seats in the Colosseum was the same as in other amphitheatres and theatres of Rome, and also in the *Circi* as far as its rather different arrangements would allow.

Suetonius (*Aug.* 44) mentions that Augustus made new and elaborate enactments, as to the positions of various people in the places of amusement of Rome. See p. 283. The Vestals though allowed to be present in the front rank at gladiatorial fights, were excluded from the contests of nude Athletes, and other women were not only excluded by Augustus from the athletic sports, but were only allowed to sit in the top galleries of the amphitheatres while contests of gladiators were going on.

A very long and interesting inscription, which was found in 1699, outside the *Porta Portuensis*, is of special value, not only as showing the manner in which seats in the Colosseum were divided, numbered, and their compartments named, but also as showing that the building was carried to a great height as early as the year 80 A.D. *Cor. In. Lat.* vi. part i. p. 506; and Henzen, *Acta. Frat. Arval.* Berlin, 1874. This large inscribed slab, now in the Capitoline Museum, contains, among

a number of other enactments, those made with regard to the seats of the inferior members of the *Collegium* of the *Fratres Arvales*;[1] the slab is dated by the names of the consuls, which gives the year A.D. 80. The enactment was made in *the Temple of Concord*, in the presence of the *Fratres Arvales*, and some of the secular officials of Rome.

The paragraph is headed LOCA · ADSIGNATA · IN · AMPHITHEATRO. The *Consules Suffecti* are L. Ælius Plautius Lamia, and Q. Pactumeius Fronto (80 A.D.); names of other officials follows; and then comes the list of three groups of seats:—

I. In the first *Mœnianus* or band (that is the group immediately above the *Podium*) in the twelfth *Cuneus* (or wedge-shaped division of the *Cavea*) on marble seats (parts of), eight *gradus* or tiers; the space is further defined by the mention of the number of feet which was reserved in these eight *gradus;* this detail was necessary, as there were no arms or side division to the seats above the *Podium*.

II. The next lot was in the second *Mœnianus*, also with marble seats, the number of the *Cuneus*, the *gradus*, and the number of feet reserved in the *gradus* are all specified.

III. The third lot of seats were *in summo mœniano in ligneis*, in the highest division, the seats of which were not of marble like the lower two, but of wood. This shows that in the year 80 A.D., when the Colosseum was first opened, it had two bands of marble seats above the Podium, one of which had at least as many as eight tiers in it, and above them a third story of wood. The officials who had charge of the seats, to see that they were occupied by the right people, are men-

[1] The twelve *Fratres Arvales* formed a highly honoured priesthood, whose special duty it was to offer sacrifice on behalf of the fertility of the soil. The *Collegium* included a large number of priests of inferior grades, for whom the seats mentioned in the inscription were reserved. The twelve *Fratres* appear to have sat on the *Podium*, on a level with the emperor.

tioned by Martial, xiv. 28, 29; and at v. 14 he describes the attempts of a certain pushing fellow to get into a better seat than his rank entitled him to.

Calpurnius (*Ecl.* vii.) gives an elaborate account of the scenic effects, and the splendours of an amphitheatre in Rome, but it is probable that he is not describing the Colosseum, but one of the other amphitheatres of Rome; in any case his remarks would probably apply equally well to the Flavian Amphitheatre. He describes grand and complicated scenery, gardens, rocks and caverns, which seemed to rise out of the *Arena*, and the sudden formation of a great lake. The marble colonnades were plated with gold, the gratings which defended the *Podium* from the beasts were of gold (or gilt) wire; the *zonæ*, or walls which divided the tiers, were studded with mosaics of precious stones (that is of the jewel-like glass *tesseræ*); awnings and cushions were of silk, and fountains poured forth jets of perfumed water.

A large amount of storage-room must have been required for the bulky scenery used at these shows; and it is interesting to find that the Greek architect, Apollodorus of Damascus suggested that the great elevated *Stylobate*, on which the Temple of Venus and Rome, designed by Hadrian, was to stand, should be formed with chambers in its concrete mass, in which the scenery for "the *Theatrum*"[1] might be fitted together out of sight and rapidly brought into the *Arena*—*καὶ ἐς τὸ κοῖλον τα μηχανήματα ἐκδέχοιτο, ὥστε καὶ ἀφανῶς συμπήγνυσθαι, καὶ ἐξ οὐ προείδοτος εἰς τὸ θεάτρον εἰσάγεσθαι*; Apoll. quoted by Dion Cass. lxix. 4.

The *construction of the Colosseum*, in its skilful use of varied materials, each applied so as to get the utmost benefit from its special qualities, is perhaps the most remarkable existing instance of Roman utilitarian architecture. The materials

[1] The Colosseum was usually called *θεάτρον* by the Greeks; *amphitheatrum* not being Greek either in fact or in name, although compounded of two Greek words.

used are three sorts of concrete, brick-facing, massive blocks of tufa and travertine; and lastly, marble for columns, cornices, paving, seats, and other ornamental purposes. The whole of the exterior is of massive travertine, in very large blocks, carefully jointed, set without mortar, and each clamped to the next with heavy iron clamps, run with lead.[1] The paving on the ground floor, except that of the inner ring round the *Podium*, which is of thick slabs of white marble, is of blocks of travertine, and the columns of the lowest order stand on a *Stylobate* of three steps, which run all round outside the oval; the two top steps are cut in the solid out of a great travertine block 4 feet 6 inches wide. Some of the blocks in the piers are over 7 feet long. The lower order of arches under an entablature, supported by engaged columns,[2] is debased Tuscan in style, the capitals are well moulded, but the base mouldings are coarse and inelegant. In fact, throughout the building, little taste or refinement is shown in the details. This is specially apparent in the coarse mouldings of the imposts of the inner square piers, the slight pilasters of which do not project enough to stop the heavy impost capping, and hence these have to be cut off in a very awkward way. In the middle of the side towards the Esquiline traces can be seen of the start of the long colonnade, which once joined the amphitheatre to the *Thermæ of Titus*. At this point the arch is wider than the rest, and is unnumbered; on each side of it the steps of the *Stylobate* stop short, leaving a level surface on which stood the first marble columns of the arcade; a piece

[1] The numerous holes, which disfigure the arcades, were made during the early middle ages in attempts to extract the then valuable iron of the clamps; the amount of trouble taken in cutting through the hard travertine to extract each clamp shows that labour must then have been worth but very little, or iron very scarce.

[2] The outer arches of the lowest tier had each a number over it, ranging up to lxxx. There still remain arches numbered xxiii to liii, and one unnumbered arch—the emperor's entrance from the Esquiline.

of one of these columns still exists. Under this colonnade a subterranean passage ran towards the *Thermæ;* it is vaulted in concrete, but only its commencement has been cleared out.

The next order has similar rows of arches, but with engaged columns of Ionic style, unfluted, and with capitals only roughly blocked out.[1] The columns stand on pedestals, the die and mouldings of which return under the arches, forming a sort of *attic* over the main cornice of the order below. The third order is the same as the second, but with Corinthian Capitals, also only roughly sketched out; the cornices of both are debased, or rather simplified forms of the orders they are intended to belong to. Each of the arches in the two upper tiers was filled in with a thin and low parapet wall, in the centre of which, on the outside of the parapet, was a projection which formed the pedestal for a statue—one in each archway. Only one of these parapets is complete; it is in the top tier, opposite the Esquiline, and by it can be seen the dowel-holes for the (now missing) pedestal. The passages, which follow the outside of the oval by the arcades, are vaulted with concrete made of pumice stone or soft tufa, with occasional rings of brick inserted. These vaults were cast in fluid concrete on wooden boarded centering, and are free from the lateral thrust that constructional arches would have. These vaults, and others throughout the building, were covered with fine hard marble-stucco, moulded with panels containing foliage and figures in reliefs, all once decorated with painting. In the sixteenth and even as late as the eighteenth century a great deal of this delicate stucco work still remained, but now all is gone except one bit under the arch nearest to the *Podium* of the Imperial entrance from the Esquiline. These reliefs were especially used to decorate the raking vaults under the various staircases, and those of the *ambulacra* and *vomitoria*,

[1] The whole external façade of travertine was once probably covered with *opus albarium* (stucco), and the more minute details would be modelled in it, over the rougher stone.

concentric passages and exits. They have fallen off the vaults owing to the imperfect adhesion of the stucco to the cast concrete of which the vaults are made. On this concrete the impress of the boards of the centering is very visible; it has been pecked over to form a key for the stucco decoration, but this was not sufficient to give it a firm hold. The method of studding the surface with iron nails, always used, and with greater success, in the case of walls, was not applied by the Romans to their vaults.

The construction of the inner walls is specially worthy of attention. These walls, which carried the *Cavea*, with its sloping tiers of marble seats, radiate inwards towards the various centres from which the oval of the plan is struck, and are set rather close together; on them rest the raking vaults which support the seats and the stairs; thus the nearer the wall is to the *Arena*, the less it is in height, and the less need it has for very great strength. Of the three materials used for these walls, concrete is subjected to the least pressure, next comes *opus quadratum* of tufa, and thirdly travertine, the strongest of the three. Thus the inner parts of the radiating walls, where the height is insignificant, are made of concrete of mixed broken bits of tufa and brick; the foundations are of concrete made with the very hard lava (*silex*) used for the Roman roads; this is for extra strength; the vaults in many parts, but not all, are of concrete formed of pumice stone, for the sake of lightness. At the ends of these low radiating concrete walls, travertine piers are built as points of special strength. Again concrete walls are used in other parts of the radiating walls, but higher up where they have no great weight resting on them. In all parts the concrete walls are faced with the usual skin of triangular bricks, with many arches introduced, apparently as relieving arches, but of no real constructional use. See above on arches in brick facing, p. 32.

The brick-work of the facing is of the neat regular kind, with rather thick bricks, which is peculiar to the Flavian

period; it exactly resembles that in the *Palace of Domitian* on the Palatine, having bricks averaging $1\frac{1}{2}$ inch in thickness with $\frac{1}{2}$-inch joints. Here and elsewhere the whole surface of the brick facing is studded with large iron nails driven in, when the mortar was soft, to form a key for the stucco, which in the Colosseum covered every inch of brick facing. The sham relieving arches are of the usual 2 feet tiles, mostly cut into three, with a few whole ones at intervals.

The outer and lower parts of the radiating walls, where the pressure was great from the great height of wall above, are built of massive blocks of brown tufa, set with a thin skin of mortar in the joints. Strong as these massive tufa walls really were, when protected from weather, the cautious engineer who built the Colosseum was not satisfied without adding additional points of strength, and so at intervals he built piers (as it were) of travertine, not projecting, but flush with the tufa walls, and tailing into them on each side.[1] On account of this the tufa blocks do not run in the usual 2 foot courses, but range with the irregular (pseudisodomous) courses of the travertine. In fig. 33 is shown one of the points in the upper part of the radiating walls, where all three methods of construction are seen together—namely the tufa wall, with its upright strip of travertine, and upon that the brick-faced concrete wall, with its sham relieving arches, upon which, finally, rests the raking concrete vault which carried the tiers of marble step-like seats.

A large drain runs all round the oval of the plan, passing under the radiating walls where they are highest, that is nearest to the double ambulatory of the ground floor; a large

[1] Mr. Parker, in his work on the Colosseum, wrongly asserts that these travertine "piers," were later insertions; his failure to understand the objects of the Romans in using these different materials led him to think that each was the work of a different time, and has hence caused him to invent a complete imaginary history of the building, very far removed from the real one.

travertine keystone is inserted in the walls where this drain pierces them. Other smaller drains from the central *Arena*

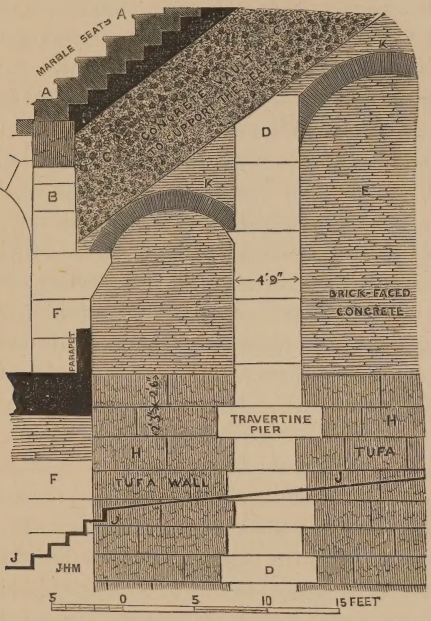

Fig. 33.

Example of construction in which many materials are used; upper part of one of the inner radiating walls of the Colosseum.

A A. Marble seats on brick and concrete core, supported on vault made of pumice-stone concrete (C).
B. Travertine arch at end of raking vault (C).
D. One of the Travertine piers built in flush with the tufa wall as a point of extra strength.
E E. Wall of tufa-concrete faced with triangular bricks.
F. Travertine pier at end of radiating wall.
G. Brick-faced arch of concrete to carry floor of passage.
H H. Tufa wall, Opus quadratum.
J J J. Line of steps in next bay.
K K. Surface arches of brick, too shallow to be of any constructional use, and not meant for ornament as the whole was stuccoed.

communicate with this main one, radiating outwards to it: their start may be seen in the recesses of the *Podium:* they are roofed with two large tiles leaning together, and forming a triangular top—a very common way of roofing the smaller drains in Rome. The larger one, into which they all run, was roofed in parts with brick arches, and in other parts only by the large travertine slabs of the pavement.[1]

At the four *axes* of the oval there are entrances under travertine arches, two leading to the *Podium*, where the emperor sat, on the Esquiline and Cælian sides; and two at the ends of the longer *axes*, leading into the *Arena;* through these latter archways entered the processions of gladiators, who were about to fight. At these four points travertine is used along the whole depth of the entrance, from the outside to the *Arena*, no tufa or concrete, except for the vaulting.

The *Arena* was originally smaller than it looks at present, owing to the destruction of the wall that fenced in the beasts, and prevented their reaching the *Podium*. The position of this wall, which was of travertine, can be traced at one point on the Esquiline side; the narrow passage between it and the *Podium* was paved with massive slabs of travertine. This wall was probably low, so as not to obstruct the view, and on it was fixed a metal screen, with network of gilt bronze, and a top rail made to revolve, so that even the active panthers and other *felidæ* could not climb over it; Calpurn. vii. 51-6; Pliny, *Hist. Nat.* viii. 7.

The *Podium* is a long encircling *suggestum* or platform, about 12 feet high, built of brick-faced concrete, and once

[1] Owing to the position of the Colosseum in the hollow once occupied by the *Stagna* of Nero, a natural deep depression abounding with springs of water, its careful drainage was a very important matter, and was arranged with the greatest possible skill and accurate adjustment of levels, forming a complete network round and inside the building. The repair of this system of drainage is recorded in one of the inscriptions published by the Comm. Lanciani.

covered with marble, having a moulded plinth and cornice; and probably a colonnade supporting a roof or canopy over the heads of the dignitaries who sat on it. It was seated, not with step-like grades of seats, but with rows of separate marble thrones, each inscribed with the titles of the official who occupied it. This system of marble inscribed thrones, and their form, were taken from the thrones in the front row of the theatres of the Greeks; some of which are still *in situ* in the great Dionysiac Theatre at Athens. Several fragments of these have been found in the Colosseum.[1]

At the back of the *Podium* a wide passage, handsomely paved and lined with slabs of marble, ran all round the oval; and from it a number of marble stairs ascended to the top of the *Podium*. The start of these marble steps still exists at one point on the Cælian side, and in the second step from the bottom holes remain for the pivots and bolts of bronze gates which shut in each staircase at its foot. The massive marble paving of the passage, from which the *Podium* stairs ascend, has a channel for rain-water on each side, slightly sunk in the marble, and the surface of the pavement is curved upwards in the middle, so as to throw the water into the channels. Some of the paving slabs are 10 feet long, and each is fastened to the next with metal pins.

Besides the stairs, of which there were eight in the whole circuit, there are two other sorts of breaks in the *Podium*. On each side of the two main gladiators' entrances, at the ends of the oval, the *Podium* is interrupted by approaches, 6 feet 9 inches wide, to the passage between it and the missing fence

[1] A large number of these marble seats were taken during the middle ages, and used as Episcopal thrones in the centres of church apses: many of these still exist in the Roman churches. A few, those for example in the churches of *S. Pietro in Vincoli*, and *S. Stefano Rotondo*, are of pure Greek workmanship and design, and were probably stolen by the Romans from the theatre of some Hellenic city, for use in the Colosseum or other place of amusement.

wall of the *Arena*. This approach is formed by two marble steps and a gently-inclined slope with massive slabs of white marble, which lead from the higher level of the passage behind the *Podium* to the lower level of the passage in front of it.[1] There were four of these approaches, one on each side of the two main entrances to the *Arena*.

Another form of break in the *Podium* is a sort of projecting balcony, 6 feet 9 inches wide, the marble pavement of which is level with that of the passage behind the *Podium*, and jutted out a little way into the passage between the *Podium* and the fence wall, at a level of about 2 feet 9 inches above the lower paving of the passage round the fence wall.

One of these, on the side by the Esquiline, is well preserved, with its massive projecting slab of white marble, channelled at the edges with rain-water gutters. In it are marks of the marble parapet of the balcony, and at its edges the holes for fixing the thick marble lining of the *Podium;* the projecting part of the marble floor rests on a large block of travertine. There were eight of these "balconies" in the whole circuit of the *Podium*.

In the front face of the *Podium* a number of nearly square recesses are formed, which opened into the passage between it and the fence wall; they are about 6 feet high, 6 feet 6 inches wide, and 3 feet deep. From these niches start the drains mentioned above, which radiate to the main drain, forming an oval ring round the whole building. Like the rest of the *Podium*, these recesses were lined with marble, the cement backing of which, and many of the iron clamps, still remain. These recesses were twenty in number; their use is not known.

Behind, and above the *Podium*, sloped up the *gradus* or step-like seats where the bulk of the spectators sat. The lowest range, being nearer the *Arena*, was the more honourable; it

[1] The best preserved example of this slope and the two steps is that by the main entrance from the *Sacra Via* end, on the left, as one enters into the *Arena*.

consisted of about twenty tiers, and a great part of it was reserved for persons of the Equestrian ranks—*Equites.*[1] Above them, and separated by a *zona* or *præcinctio* (a low wall and passage) was a large block of seats for the mass of the Roman citizens. Along the top of this is a high brick-faced concrete wall, once, of course, lined with marble, pierced with a series of doors, windows, and recesses for statues. At this point Domitian's work ends, and the galleries above that are of the third century. These uppermost tiers were occupied by the women and by the lower classes of Rome; and to them admission was frequently free.

Along the highest tier ran a handsome marble colonnade of the Corinthian order; many fragments of the columns and their capitals still exist, and have rolled down the *Cavea* to the bottom. The capitals are of more than one date; some have well cut foliage, while others are only blocked out. Some are of late and fanciful design, with winged serpents and Medusa heads introduced among the acanthus leaves. All appear to be late in date, and probably belong to the restorations of Severus Alexander and Gordianus III.

One of the capitals is carved out of an immense marble frieze from some much earlier building, with sinkings for a bronze inscription; the *matrices* for the letters $\begin{matrix} \text{A} \\ \text{NER} \\ \text{IBV} \end{matrix}$[2] still remain

[1] The rights of the Roman *Equites* to places of distinction in the various places of amusement were confirmed and increased by a law introduced in 87 B.C. by L. Roscius Otho, Tribune of the People; it was known as the *Lex Roscia Theatralis.* The *Scamna Equitum* are mentioned by Martial, v. 41. Till the third century no names of individuals were inscribed on the seats—only titles or words descriptive of classes; in the fourth and fifth centuries individual names were occasionally affixed. Many interesting inscribed fragments of the *gradus* are given in Lanciani's valuable work on the inscriptions of the Colosseum.

[2] Possibly part of *NERvæ Trajano TrIBUn. Potestate;* the fragment may be from Trajan's Forum, possibly from the Arch, the reliefs of which were used by Constantine in his Arch by the Colosseum.

on the top of the capital. The existing columns are of white Luna marble, Carystian *cipollino*, and Egyptian granites; all appear to have been monoliths. Other architectural fragments are of Pentelic and Phrygian marble (*pavonazetto*).

A large number of other marble blocks, also taken from some earlier building, have been used to cut a long inscription on; see Lanciani, *Iscriz. d. Anfi. Flav.* These are the blocks of a very long moulded Corinthian plinth, the large *torus* of which has been hacked away, and the blocks set on edge; the late inscription has then been cut on its upper bed: it records a restoration in the reign of Gratianus and Valentianus, c. 375 A.D.

On one of the inscribed fragments occurs the phrase (restored by Mommsen) AQuis DIMISSis; this refers to a restoration of the system of drainage, which, if it got blocked, would soon flood the lower levels of the amphitheatre with water, owing to its deeply sunk position in a natural basin.

A great many fragments of the marble seats (*gradus*) exist, some inscribed, but none are *in situ;* nearly every piece of marble has been stripped off the whole of this gigantic interior.[1]

The start of the main staircases leading to the upper tiers is from arches in the second (inner) surrounding ambulatory; the steps are of travertine, with ten-inch treads and ten and a half-inch risers; they have moulded nosings. Some of these stairs are very perfect on the side towards the Lateran, and show but little signs of wear. The whole system of stairs is rather complicated, and is arranged with the greatest ingenuity, so as to occupy the least space, and also afford a complete set of separate approaches to each *Cuneus* or division of the *Cavea*. Some of the smaller upper stairs are very steep; all rest on raking vaults of pumice stone or soft tufa, and each stone step was bedded on square clay tiles. The stairs which

[1] A number of small marble altars have been found in the Colosseum, cut in the shape of tripods; some of these are on the right near the main entrance.

ascended the *Cavea*, up the slope of the seats, were all of marble, like the seats themselves, and were arranged (as in the Greek theatres) to have two steps ranging with each seat.

About two-thirds up the *Cavea* there is the marked division, mentioned above, as separating the plebeians' and women's seats from the wealthier classes below. A lofty wall runs all round the oval, forming a considerable break between the highest seats of the tiers below and the lowest of the tier above. Of course all, except the top part of this enormously lofty wall, is hidden by the *Cavea;* the lower hidden part is of travertine, but the upper part, pierced with doors, windows, and recesses, is of concrete lined with brick, and was once covered with marble, having probably a cornice resting on engaged marble columns. The recesses were to contain statues. Behind this wall, at the level where it ceases to be of travertine, a low vaulted passage runs the whole way round the oval plan; lighted partly by arches which led into the *Cavea*, and partly by windows formed in the springing of the vault. From this encircling passage stairs at regular intervals ascend to the higher level, leading to the floor of the third order on the exterior, that with Corinthian Capitals. The stairs project into the passage in short double flights of five steps, passing right and left. All along its course a large open water channel runs along the floor at one side, formed of hollow blocks of travertine, thickly lined with *opus signinum*. The use of this is not clear. It can hardly have been for rain-water, as there are pipes for that set in vertical channels, 13 inches wide, formed in the faces of the walls at various points, and apparently descending almost straight down to the ground; it was more probably to carry water brought from the Cælian Aqueduct to feed the various fountains and water jets which cooled the air of the crowded amphitheatre. The doors in the upper part of the intercepting wall mentioned above, open on to the level of the floor above this passage; and it is at this point that the Flavian work ends and that of the third century

begins. This is very clearly shown by the very different character of the brick facing, which in the Flavian work has bricks $1\frac{1}{2}$ inch and joints $\frac{1}{2}$-inch, and in the later wall, bricks scarcely 1 inch thick, and joints $\frac{3}{4}$-inch to 1 inch; this later brick facing is as neat in appearance as the Flavian, and is really equally strong, though it looks less solid owing to the greater thickness of the joints. Passing towards the exterior of the building the Flavian work reaches higher; the above described brick-faced wall is level with the third (Corinthian) order of the exterior arcade, which, like the two below (Ionic and Tuscan), is of the Flavian period.

But the fourth external order, that with the tall travertine wall broken by pilasters, is a third century addition, or probably (judging from representations on coins of Titus and Domitian) a rebuilding of an earlier story. The wall is of three materials, namely, an external facing of travertine four feet thick, an internal facing of brick, and an intermediate filling in (*fartura*) of concrete, two feet three inches thick. The brick facing is a very characteristic example of early third century brick-work,[1] being exactly the same as that described above with 1 inch bricks and joints nearly the same. The concrete contains a great deal of marble, as is usually the case during a late period, and the travertine facing is partly built of numbers of blocks taken from some earlier building; among these are a quantity of drums of columns, pieces of cornices, friezes, and architraves, and other moulded details. These are allowed to project roughly into the concrete for the sake of forming a good bond, and this gives the wall the appearance of having been built roughly and in haste, but this is not really so; on the exterior (visible) face the stones are cut as truly, and jointed as neatly, as in any part

[1] From Sept. Severus to Severus Alexander the appearance of brick facings is exactly the same—neat, regular, and set in very good hard mortar; brick facing rapidly declined both in neatness and the goodness of its mortar after the middle of the third century.

of the building; and it would have been worse than useless to make the inner face regular and smooth, as it would not have tailed into and bonded with the concrete mass behind.

Two tiers of small windows in the top external order gave light to small vaulted passages, which encircled the whole building at different levels. There is a bold well designed cornice, with deep projection on the outside of the wall, and this is pierced at intervals with square holes. About fourteen feet below each hole a large travertine corbel projects from the face of the wall, and in this there is a square sinking corresponding to the hole above. This was an arrangement to hold the wooden poles that supported the awning over the heads of the spectators. A pole was dropped through each hole in the cornice, and its foot rested in the hole in the corbel below; the slightly projecting frieze and architrave of the entablature were cut away to allow the mast to rest close against the wall. Other corbels on the inner face of the wall held a corresponding set of masts.

The upper parts of each pair of poles were about 6 feet 3 inches apart, being separated by the thickness of the wall; they were probably strutted and lashed together so as to form a stiff support, as the strain of the ropes of the awning must have been very great. The awning did not, as has sometimes been supposed, cover the whole Amphitheatre; a thing which would have been practically impossible, owing to the enormous strain of so long a bearing, far beyond what any ropes could bear; but it simply sloped down over the heads of spectators in the *Cavea*, leaving the whole central *Arena* unshaded.

Corbels to support the lowest masts exist in the outer wall of the substructures below the level of the *Arena;* these poles probably rose out of the *Arena* along the line of the fence wall that protected the *Podium.* There must have been many intermediate points of support at intervals up the slope of of the seats, but no indications exist of any of these owing to

the complete removal of all the marble seats and decorations. A whole army of sailors were employed to extend and furl the awning; see Lampridius, *Comm.* 15. During the period of the most luxurious extravagance in Rome the awning and its ropes were of silk; Dion Cass. xliii. 24. During some of the scenic shows boys were hoisted up to this awning—"*Et pegma, et pueros inde ad velaria rapti*," Juv. *Sat.* iv. 122. Ropes for acrobats were stretched across the *Arena*, probably supported by the lower poles of the awning.

Traces of a continuous wooden gallery for the sailors to work on exist on the interior, at the level of the top of the outer wall, and there are remains of the brick and concrete stairs which led to this, still visible on the internal brick-facing; at one or two points these staircases crossed the upper windows between the Corinthian pilasters, and in those places the windows were built up, forming only sunk panels. Traces of other wooden galleries and stairs below that for the use of the sailors exist; holes for their joists can be traced in the wall: the exact arrangement, however, of this top story with its wooden floors and seats cannot now be completely made out.

Very near the top there appears to have been a colonnade, some large fragments of which still exist on the ground below, and one or two small pieces of marble bases still remain at this high level. There was probably another colonnade along the *Podium;* and midway there was the marble-covered wall with its doors and windows; it is now impossible to tell whether there were any other important breaks to the monotony of the sloping *Cavea.* It appears probable that there were not.

A complicated system of walls and arches exists below the level of the *Arena;* these were partly excavated by the French at the beginning of this century, but soon filled in, and not again cleared out till about twelve years ago, under the supervision of Comm. Rosa.

The floor of this subterranean part is about 20 feet below that of the *Arena.* The whole oval space is divided up

into long narrow passages by a series of walls, some parallel to the major axis, and others following the curve of the oval. The floor of the *Arena* must have been of wood, and rested on the top of the closely set walls of the substructures. In it trap-doors and grooves were probably arranged so that scenery and cages containing beasts (see below) could be hoisted up into the *Arena* floor.

These substructures are of many different dates, and show repeated mendings and patchings of earlier walls and arches. The greater part that now exists is of late date, probably of the fourth to the sixth century, but among these later structures there are fragmentary remains of a series of walls and arches probably contemporary with the original Flavian building; these earlier remains consist of series of tufa walls very neatly jointed, and built of blocks of great length and depth; some as much as 7 feet long.

In these tufa walls are remains of a number of massive arches, some flat, some semi-circular, and others formed of a quarter of a circle, with over them a course of tufa blocks raking upwards at a gentle slope. These fragmentary portions of massive tufa masonry are built up and supported in various ways by the later brickwork. It is impossible now to form any notion of what the form and use of these tufa substructions were when they were complete.

The same may be said of the greater part of the later brick walls; evidently a great deal of wooden framing connected with the scenic machinery (*pegmata*) existed in these substructures, and the absence of this timber work leaves the greater part of the existing arrangements an almost insoluble mystery. One point, however, seems clear, namely, that in the fifth or sixth century a number of rudely constructed lifts were added in four of the straight passages. These, there can be little doubt, were used to introduce wild animals suddenly through trap-doors in the wooden floor of the *Arena;* in these square lifts, grooves can be traced to guide the cages in their

ascent, and pierced stone bearers (at the top) to hold the pulleys over which ran the ropes and counterpoising weights that hoisted up the cages.

A similar arrangement of machinery and lifts in some earlier place of amusement, is described by Seneca (*Epis.* 88), who mentions the *machinatores* (scene-shifters) working the *pegmata* (lifts?) and scenery (*tabulata*) rising up to a great height.

A large number of massive bronze sockets, with dovetailed flanges, set in great blocks of travertine, exist in rows in various parts of the substructures, both under the *Arena*, and also in the long vaulted rooms on each side of the subterranean passage, which runs towards the Lateran, on the major axis. These bear marks of circular wear, from revolving pivots, and must have been for windlasses to hoist up the heavy scenery from the lower spaces.

The outermost oval ring of the space below the Arena is contemporary with the original Flavian building; and still remains in a very perfect state (see fig. 34). It consists of a row of recesses, eight feet wide and five feet three inches deep, made of brickfaced concrete; these appear to have been dens for wild animals. In the vaulted roof of each is an opening, immediately below a small window, which opens out of a space or passage (not cleared out) which ran all round behind the dens: food pushed through this little window would fall through the hole in the vault of the den, and thus could be supplied to the beasts. Between each pair of arched dens are the travertine corbels and grooves in the face of the wall to hold the lower masts of the awning (see p. 321).

At present these dens have open arches in front, but originally were, no doubt, filled in with a metal grating. In the floor in front of the dens, and forming a complete ring all round the oval, a drain or water channel is formed, laid carefully to fall towards the end by the *Sacra Via*. In this a clear stream of pure water still runs; and this stream is brought

along a channel under the floor of the subterranean passage leading towards the Lateran. Opening at intervals along the whole circuit of this water-channel are small branch channels,

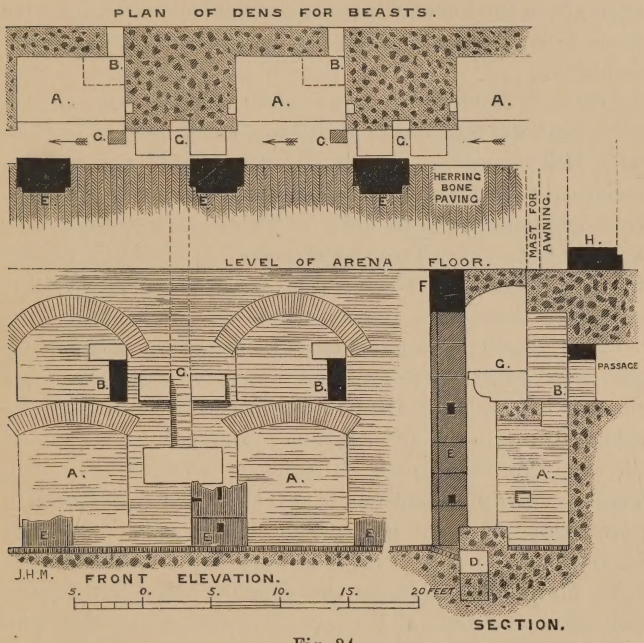

Fig. 34.

Colosseum: part of the substructures below the Arena.

The plan is shown straight, but it is really slightly on a curve.

A A. Recesses to hold beasts.

B B. Small windows and openings in the top of the dens, by which food could be supplied.

C C. Openings in the top of the water channel.

D. Water channel shown in section.

E E E. Tufa piers in front of the dens; in the elevation they are shown broken off.

F. Flat arch of tufa on the top of the piers.

G G G. Pairs of large travertine corbels to hold the lowest masts for the awning.

H. Existing piece of fence wall round the arena to keep in the beasts.

leading from the brick herring-bone floor (*opus spicatum*) of the underspace, so that any water which got on to this floor would drain off into the stream along the oval ring. Other openings in the top of this water-channel look as if they were made to allow the animals in the dens all along its course to drink.

Close in front of these rows of dens are a series of tufa piers, with flat tufa arches at the top, much restored in parts with late brickwork. These piers are spaced out with no reference to the archways of the dens, and are evidently a later addition, but when made or with what object it is now impossible to tell. These piers are full of holes for wooden framing of some sort, which appears to have been fixed against them.

Four long subterranean passages led from the space under the *Arena* in different directions. One on the minor axis towards the Baths of Titus on the Esquiline, below the long colonnade mentioned above (p. 303). Another in the opposite direction led to the Palace of Commodus on the Cælian Hill. This was partly cleared out in 1813–15, and was found to have mosaic pavement, marble wall-linings, and stucco reliefs on the vault. This passage was added by Commodus to unite his palace (originally the *Domus Vectiliana*) with the Colosseum, the scene of his favourite amusements. In it he narrowly escaped being stabbed by Claudius Pompeianus; see Dion Cass. lxxii. 4, 17; and Herodian. i. 15, 16. A third passage branches from that last named in a southward direction.

These three passages are not now accessible. A fourth subterranean passage, about one hundred yards of which is now cleared out, leads towards the Lateran Hill on the major axis. In this passage it is interesting to observe the massive travertine foundations of the Colosseum, built of enormous blocks, a few of which are taken from earlier buildings: the floor of thick travertine slabs over the passage was supported on a series of huge flat arches, very neatly jointed, but not other-

wise carefully worked. Some of the blocks are as much as eight feet long. The floor of this passage is four feet six inches above the herring-bone pavement of the space under the *Arena*, and under it runs the channel which brings the stream of water into the oval ring-channel mentioned above. Out of the passage is a branch, communicating with the long vaulted room on each side, in the floor of which are the rows of bronze sockets mentioned above, and by this branch, on each side, is a narrow winding stair, with very steep steps, ingeniously planned so as to fit in a very small space. These stairs lead up to the ground level in the central gladiators' entrance towards the Lateran. A corresponding pair of staircases probably exist at the other end of the building, but that half of the substructures is not now cleared out. Two other square chambers, each with a bronze socket in its pavement, open out of the subterranean passage farther away from the *Arena*.

The colossal gilt bronze statue of Nero, about 119 feet high, originally stood in one of the courts of the *Golden House*.[1] When Vespasian pulled down this enormous palace he moved the Colossus to the *Summa Sacra Via*, probably to the place afterwards occupied by the north-west end of the temple of Venus and Rome. At the same time he removed Nero's head, and replaced it with that of *Apollo Helios*, surrounded with rays of light.[2]

When Hadrian built his temple of Venus and Rome the Colossus was again moved, and set on the brick and concrete pedestal, which still exists between the temple and the Colosseum.

[1] This statue, which was the work of a Greek called Zenodorus, appears to have been badly cast, as Pliny (*Hist. Nat.* xxxiv. 18) remarks that it showed that skill in bronze casting had ceased to exist, in spite of its being the work of a very able sculptor, who was liberally paid by Nero.

[2] Like the three-quarter face of Apollo on the coins of Rhodes, which is probably similar to the head of the celebrated Rhodian Colossus of Helios.

The Amphitheatrum Castrense. This name has been given with much probability to a small amphitheatre, which is on the line of the Aurelian wall. It is catalogued in the *Curiosum* in Reg. v. This amphitheatre was probably built for the amusement of the soldiers in the Prætorian camp. In plan it resembled the Colosseum, and was surrounded by open arches with engaged columns, two orders high, both Corinthian in style. The foundations are of cast concrete, made of lava, the walls are of tufa concrete, faced with brick, and all the architectural details are of very neatly moulded brick or terra-cotta, once covered completely with white stucco, on which coloured decorations were painted. The Corinthian capitals of the engaged columns are of terra-cotta built in courses, ranging with the rest of the brick facing. Fragments of ante-fixæ, delicately moulded friezes, and other terra-cotta ornaments, have been found in quantities scattered round the building, but none of these minuter details are *in situ.* In a few places blocks of travertine were embedded in the concrete and brick wall to give points of extra strength. One large block is set under the base of each engaged column in the lower tier. And two small rectangular bits of travertine are built in on each side of the jambs of the lower arches. The use of these apparently was to fix metal screens in each archway.

The general character of the work appears to belong to the early part of the second century A.D. The brickwork is not Flavian in appearance, but resembles that of Trajan's reign. It may, however, be earlier. The facing is very neat and regular; the bricks average 1 to $1\frac{1}{4}$ inch in thickness, with joints $\frac{1}{2}$ to $\frac{3}{4}$ inch. They are hard and well burnt, and are yellow and red, mixed at random. The facing bricks of the arches are the usual *tegulæ bipedales*, tiles two Roman feet square, which have been cut into three pieces, and at rare intervals a whole tile built in, in the usual way for the facing of arches. The interior is now completely ruined, but was

once richly ornamented with marbles; of which an immense number of fragments lie all round.

This amphitheatre was included by Aurelian in the circuit of his wall, in such a way that about half the curved arcading of the exterior was visible outside the city. The open arches of the amphitheatre were then built up, so as to form a strong defence, like the wall on each side of it. The original level of the ground round this amphitheatre was several feet higher than it is now; and part of its foundations are now exposed by the removal of the soil, both within and without the circuit of Aurelian. At one point only is any of the upper tier of arches still preserved; that is immediately outside the Aurelian wall, where it runs up to the amphitheatre, on the side nearest the *Porta Asinaria*. A very little more than now exists is shown by Du Perac in his *Vestigj di Roma*, 1575.

CHAPTER XI.

BATHS.

Till the time of the Empire the Baths of Rome were on a comparatively small scale, and constructed without that architectural magnificence which made the later *Thermæ* perhaps the most magnificent, and by far the largest, of all the public buildings of Rome.

One of the earliest baths (*Balnea* or *Balneæ*, from the Greek *βαλανεῖα*) mentioned by a Roman writer was that in the Villa of Scipio Africanus at Liternum, about 190 B.C., which Seneca says consisted only of one small dark chamber, after the ancient fashion. In the middle of the first century there were many *Balneæ* in Rome : see Cicero, *Ep. ad Q. Frat.* iii. 1 ; and *Pro Cael.* 25, 26 : a detailed description of their construction is given by Vitruvius, v. 10 and 11.

The system of heating by Hypocausts[1] is said to have been introduced into Rome about 100 B.C. by Sergius Orata : see Val. Max. ix. 50 ; and Pliny, *Hist. Nat.* ix. 54.

The large and very magnificent Baths which occupied so extensive a part of the area of Rome under the later Empire were usually called *Thermæ* (*θέρμαι*). The description of Vitruvius was probably written before the construction of the Thermæ of Agrippa, which were the first built in Rome, and refers to the smaller *Balneæ* which were then in use. He says that the Baths for men and women should be in adjoining

[1] Baths so heated were called *Balnea pensilia*, from their *Suspensuræ* or "hanging floors" : see p. 334.

buildings, so that one set of furnaces and hot-water cisterns might be available for both.[1] This is the arrangement followed in a small set of *Balneæ* at Pompeii, and also in a building shown on the marble plan, with the inscription *Balneum Cæsaris*. In later times either both sexes bathed together or else the Baths were reserved on certain days for women only, as is the modern custom in the East.[2] Edicts forbidding promiscuous bathing of both sexes were issued by Hadrian and Marcus Aurelius (Spartian. *Hadr.* 1; and Capitol. *M. Aur. Ant.* 23. Consequently the great *Thermæ* have no separate sets of rooms.

In addition to Vitruvius, our knowledge of the names of the various rooms in Roman Baths is mainly derived from Lucian's Ἱππίας ἢ βαλάνειον, assisted by a very curious wall painting which was found in the *Thermæ* of Titus. This is cleverly contrived, to show the internal arrangements by combining perspective with section, and the names of the various parts of the building are written on them (see fig. 35).

The first room shown in this valuable diagram is the *Elæothesium*, or room for anointing with oil and perfumes. The whole skin of the bathers was covered with olive oil, which was then scraped off with a sharp strigil; this was done for the wealthier classes by slaves called *aliptæ* or *unctores*. The fine ancient copy of the celebrated *Apoxyomenos* by Lysippus, now in the Vatican, represents an athlete after his bath removing the oil with a strigil. This statue was in front of the *Thermæ* of Agrippa: see Pliny, *Hist. Nat.* xxxiv. 19. A separate dressing-room, or *Apodyterium*, is not shown in the

[1] Varro, *Lin. Lat.* ix. 68, mentions separate baths for women—"*Bina conjuncta ædificia lavandi causa, unum ubi viri, alterum ubi mulieres lavarentur.*"

[2] The public baths were under the supervision of the Ædiles, and were guarded by *Balneatores*, who received the fee for admission, which was usually one *quadrans*, less than a farthing; children were admitted free: see Hor. *Sat.* I. iii. 137.

painting; in the smaller *Balnea* the *Frigidarium* or *Tepidarium* was used for this purpose. Bathers' clothes were taken care of by slaves called *Capsarii.*

The *Frigidarium* is shown next in order in the painting; and then the *Tepidarium*, with benches (*Scholæ* of Vitruvius) against the wall. This is heated by a *hypocaust*,[1] which is shown extending under part of the floor. The next two rooms

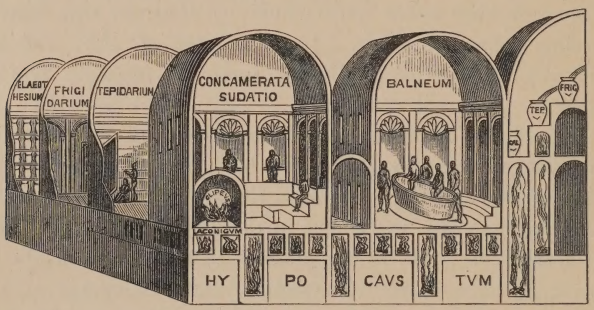

Fig. 35.
Roman Bath, from an ancient painting.

are called *Concamerata Sudatio* and *Balneum;* both are strongly heated by furnaces (*præfurnia*) and *hypocausts.* In the room labelled "*Balneum*" is a *labrum*, one of those large monolithic baths, of which so many magnificent examples have been found in Rome.[2]

The last room contains three bronze cisterns (*Ahena*), to supply cold, tepid, and hot water, arranged to overflow from the cold into the tepid, and then to the hot-water cistern.

[1] Fig. 36, on page 334, shows the construction of the Roman *Hypocausts.*

[2] These are formed out of enormous blocks of marble, porphyry, granite, or Oriental alabaster. Many magnificent examples in all these materials are preserved in the Vatican. In the round Hall is an enormous circular *labrum* cut out of one block of porphyry. Two fine *labra* of Egyptian granite from the Baths of Caracalla are used as basins for fountains in the piazza Farnese.

One point in the painting is not clear; what appears to be a part of the furnace projecting into the *Sudatio* is labelled *Laconicum*, but this, according to Vitruvius and other writers, was a sweating room, probably rather hotter than the *Sudatio*. It was circular, with a domed vault, in the centre of which was a round aperture (*hypœthrum*), which was closed or opened by means of a bronze valve called *clypeus*, from its shield-like form; this was arranged to move up and down by means of bronze chains, so that the exact amount of cold air admitted might easily be regulated.

In the larger Baths the *Frigidarium* contained a swimming bath, *natatio* or *piscina;* the smaller ones were without it. The *Sudatio* contained the *calda lavatio* or hot bath, and the *Tepidarium* the *frigida lavatio* (Greek λοῦτρον).

The painting from the Baths of Titus, and all existing examples, appear to have had concrete vaults over each chamber, but in the time of Vitruvius (reign of Augustus) wooden ceilings were often used. He gives an interesting description of the great care with which this was to be hung by iron clamps to the wooden roof, and then covered with that very hard cement which was made of lime, pozzolana, and pounded potsherds—"*Opus tectorium e testis tunsis*"—similar in character to the *Opus signinum* used for the *Specus* or channels of aqueducts. Over this was laid an ornamental coating of fine hard stucco made of pounded white marble—*Opus albarium* or *Cœmentum marmoreum*. This great care was necessary to prevent the condensed steam from the hot baths soaking through the plaster ceiling and causing the wooden joists to rot.

Vitruvius's description of the *Hypocausts* or hollow floors used for heating the hot rooms (*Calidaria*) agrees closely with many existing examples; see fig. 36.

The lower floor was to be laid with 2-feet tiles (*tegulæ bipedales*), over a bed of concrete; on this, all over the area of the room, rows of short pillars (*pilæ*) were built to support the upper or "hanging floor" (*suspensura*). These *pilæ* were two

feet high,[1] made of *tegulæ bessales*, or tiles eight inches square, set, not in mortar, but with clay in the joints; in existing examples these clay joints have been baked into brick by the

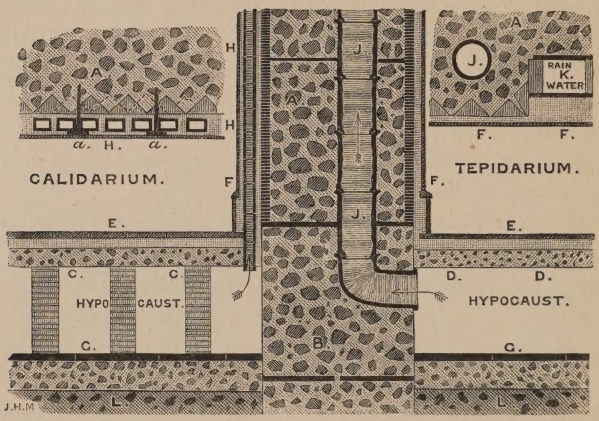

Fig. 36.

Baths of Caracalla; sections through the floors and walls showing the different methods of heating.

A A. Concrete wall faced with brick.
B. Lower part of wall with no brick facing.
C C. *Suspensura* or upper floor of hypocaust supported by pillars.
D D. Another floor with support only at the edges.
E E. Marble flooring.
F F. Marble plinth and wall lining.
G G. Under-floor of hypocaust paved with large tiles.
H H. Horizontal and vertical sections of the flue-tiles which line the walls of the Calidarium.
a a. Iron holdfasts.
J J. Socket-jointed flue-pipe of Tepidarium.
K. Rain-water pipe.
L L. Vaults of crypt made of pumice-stone concrete.

action of the fire, which played among the *pilæ* all over the space below the *suspensura*.

In later times, when the Roman architects had grown

[1] In existing examples of later date the *pilæ* are higher, leaving more space between the two floors.

bolder in their use of concrete, the *pilæ* were frequently omitted,[1] and the whole upper floor was supported only at its edges, as if it were one immense slab of stone. The *suspensura* itself was usually about eighteen inches thick, and was formed of four distinct layers—(i.) its main mass of rough concrete (*rudus*), usually of broken tufa; (ii.) a layer of *Opus testaceum*, made of pounded brick and potsherds; (iii.) a thin bed of hard white marble cement (*Cæmentum marmoreum*) or *nucleus*, in which were bedded (iv.) the marble *tesseræ* or slabs which formed the upper surface of the floor.

The furnace (*præfurnium*) was at one side or below the *hypocaust* (ὑπο-καυεῖν), and the heated air and smoke from it, after circulating between the two floors, escaped up a flue which was formed in the thickness of the concrete wall. This flue was usually formed of socket-jointed clay pipes, about 10 to 12 inches in diameter, round which the fluid concrete of the wall was poured.

An additional method of heating, not mentioned by Vitruvius, was used under the later empire for the *Sudationes* or hottest rooms. This was done by lining the whole wall surface of the bath-room with upright lines of flue-pipes, rectangular in section (see fig. 36), which communicated at the bottom with the space under the *suspensura*, and were carried up to the top of the building where the hot air and smoke escaped.[2] Thus the whole wall surface, as well as the hollow floor, was strongly heated by this sort of jacket of hot air flues.[3] Both these methods of heating were used under

[1] Several examples of this can be seen in the baths of Severus's Palace on the Palatine; an even more astonishing use of unsupported concrete floor existed at the house of the Vestals; see p. 196.

[2] It is not apparent how the exit at the top of these flue-pipes was managed, as no complete wall lined with them still exists. Probably the hot air from the flues on each wall was collected into one pipe, and led through the roof by a single chimney.

[3] These wall-flues can be best examined in the large round chamber of

and around the hot-water baths, which, in the great *Thermæ*, are set in recesses of the *Calidaria*, as for example in the great domed Hall of the Baths of Caracalla.

It has been for several centuries a disputed question

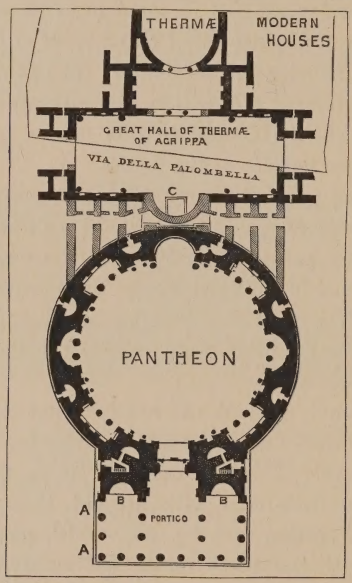

Fig. 37.

Plan of the Pantheon and part of the Thermæ of Agrippa.

A. Angle of portico, rebuilt in the seventeenth century.
B B. Niches which contained colossal statues of Augustus and Agrippa.
C. Pedestal for statue, and apse added by Hadrian.

whether the Pantheon ever formed part of Agrippa's baths, or was a separate building; the discoveries, however, which were made in 1882, by the removal of the block of houses at the back of the Pantheon have made it almost, if not quite

the Baths of Caracalla, in the upper part of the Palace of Severus, in the upper rooms of the house of the Vestals, in the so-called Bath of Heliogabalus by the *Sacra Via*, and in the house at the extreme western angle of the Palatine beyond the *Scalæ Caci*.

certain, that there was no connection whatever between the two buildings.

Traces exist, not only of the marble wall linings outside the back of the Pantheon, but also of its various cornices at different levels which originally continued round the whole of the back, showing that originally the complete circuit was exposed to view; moreover, the existing walls which join the Thermæ and the drum of the Pantheon are all considerably later in date than the time of Agrippa, being partly the work of Hadrian, and partly of Sept. Severus (see fig. 37). Thus it is evident that the Pantheon when first built was a completely isolated structure; and though in later times the Thermæ were extended against, and even on both sides of the Pantheon, yet at no time was any entrance broken through to connect the one building with the other. Moreover, if further proof were wanting to contradict the theory that the Pantheon was once the *Calidarium* or *Laconicum* of the baths, this is supplied by the fact that there is no trace of any *hypocaust* under the floor, but merely an ancient drain to carry away the rain-water that fell through the opening in the dome. Again, it was consecrated as a temple to Mars, Venus, and other mythical ancestors of the Gens Julia, probably out of compliment to Augustus, certainly very shortly after it was built, and probably immediately after its completion in 27 B.C., see Dion Cass. lxiii. 27.

An inscription found in the sacred grove of the XII *Fratres Arvales* in 1865, outside the Porta Portuensis, records that it was used by this important *Collegium*, or endowed body of priests, as a meeting place, before they met in the Temple of Concord; see Henzen *Acta fratrum Arvalium*, 1868, inscrip. No. 71. It appears from the earliest times to have been called the Pantheum; see Dion Cass. liii. 27; lxvi. 24, and Pliny (*Hist. Nat.* xxxvi. 4),[1] who mentions a row of caryatidæ, pro-

[1] It was probably called so from its being dedicated to a number of deities; but, according to Dion Cassius, from its dome, resembling the canopy of heaven.

bably round the upper part of the interior, the work of a celebrated Athenian sculptor called Diogenes; there were also statues by him on the top of the Pediment. In the Pediment was a large bronze relief representing the Gigantomachia, or defeat of the Titans by Jupiter, and other deities;[1] the holes for fixing this relief are visible all over the *tympanum*. At xxxiv. 7, Pliny records that the capitals of the columns (of the interior) were of Syracusan bronze, a name given to a certain alloy of copper and tin, which was very highly prized.[2]

The Pantheon, with its great portico, and magnificent cupola lighted only from the top, is even now, though stripped of the greater part of its marble linings, one of the most stately buildings in the world.

The internal effect of the dome with its slanting flood of sunlight is imposing beyond all possible description; the effect of its central hypæthral opening, framing a patch of blue sky, across which white clouds are seen moving, makes it unlike any other building in the world. Moreover, the apparent size of the dome is not diminished by its being raised to a great height above the floor, and consequently it looks enormously larger than the dome of St. Peter's, which is almost the same size.[3]

The internal diameter of the Pantheon is 142 feet 6 inches, and its height from the pavement to the central opening is almost, if not exactly, the same. The construction of this enormous cupola is a remarkable instance of the extraordinarily skilful use of concrete by the Romans; it is cast in

[1] See Hirt, *Geschichte der Baukunst*, ii. p. 283.

[2] The *tholus* or dome of the Temple of Vesta in Pliny's time was also covered with this special variety of bronze; the bronze of the island of Ægina appears to have been of equal celebrity with that of Syracuse; see Pliny, *Hist. Nat.* xxxiv. 5. Another variety, Corinthian bronze, was highly prized from its golden colour (Pliny, *Hist. Nat.* xxxvii., 12); whence arose the story of its being mixed with gold and silver.

[3] The internal span of the dome of St. Peter's is nearly 140 feet.

one solid mass, and is as free from lateral thrust as if it were cut out of one block of stone. Though having the arch form, it is in no way constructed on the principle of the arch.

The inner surface is divided into a series of square coffers or deeply sunk panels (*lacunaria*), now quite devoid of ornament, but once probably decorated very richly with mouldings in stucco, painted and gilt, like those which still exist in parts of Hadrian's Palace on the Palatine. The outside of the dome is not an important feature in the external design of the building, as about half of it is, as it were, buried in the enormously thick walls it rests upon.

In its original state it must have looked like a gigantic mound of shining gold, as it was covered with tiles of gilt bronze; one part only exists of this magnificent roofing, which not only covered the external surface of the dome but was carried also round the rim of the central opening or *hypæthrum*. Round this a cornice or a ring of enriched bronze mouldings still exists, the various members of which are delicately ornamented with egg and dart, acanthus leaves and fluting, finished with great care in spite of their being almost invisible at so great a height; see fig. 38.

The gilt, or rather gold-plated tiles[1] on the dome, were stripped off in A.D. 663 by the Emperor Constans II.,[2] who was carrying them off to Constantinople when he was intercepted and killed by the Saracens at Syracuse, into whose hands these and other rich spoils from Rome fell. The inner ceiling of the porch was also of gilt bronze, supported by a very curious system of bronze tubular girders. This remained intact till the reign of Urban VIII. (1623–1644), who removed it, and used the bronze to make a number of cannon for the

[1] The gilding of the Romans was not done with the immensely attenuated leaf of modern gilders, but the gold was laid on in plates of appreciable thickness.

[2] The present lead covering of the dome was put on by Nicholas V. in 1454; see Vasari, Milanesi's ed. II. p. 462, note.

Castle of S. Angelo, and also the Baldacchino designed by Bernini for the high altar of S. Peter's. The metal thus stripped off is recorded to have weighed 450,000 lbs. The form of the bronze girders is shown in some drawings made by the architect Sallustio Peruzzi, who shows many other

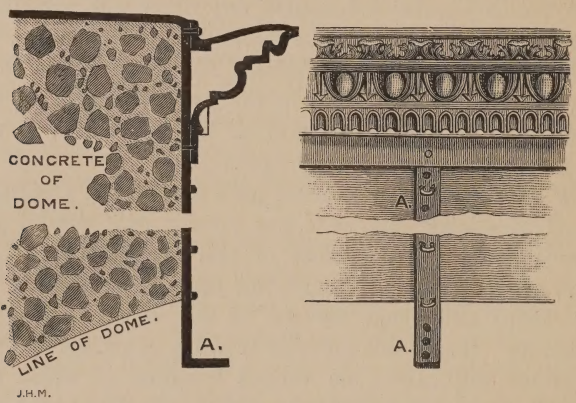

Fig. 38.

Existing bronze moulding round the central opening in the dome of the Pantheon.

A A are bronze bands to fix other parts of the lining now stripped off.

interesting details which no longer exist. These drawings are preserved in the Uffizi at Florence.[1]

The walls of the great rotunda which supports the dome are nearly 20 feet thick, cast in concrete, with the thin facing of brick which afterwards became so common; examples of the time of Augustus are very rare, as the usual facing for

[1] A paper by Comm. Lanciani, in the *Notizie degli scavi*, 1882, p. 340, gives a list of mediæval drawings of the Pantheon and adjoining Thermæ; these are by Jacobo Sansovino, Baldassare and Sallustio Peruzzi, Raphael, and Antonio Sangallo jun., in the Uffizi and *Cod. Vat.* 3439. The Barberini library (lib. xlix. 33) has other drawings by Antonio Sangallo and Guiliano di Francesco. See also Geymuller, *Documents inedits sur les Thermes d'Agrippa*, Lausanne, 1883.

concrete at that time was *Opus reticulatum*, of which Vitruvius says, *quo nunc omnes utuntur;* the actual mass of concrete used is very much reduced by a series of recesses formed in the drum. Those in the interior form large niches for statues and altars, and were enriched with marble columns and other decorations. Other semicircular chambers, set at intervals between the internal niches, were probably formed to diminish the mass of concrete required, and also to admit the air into its interior, so as to hasten its setting. These chambers are lined with neat brickwork, and have external openings both at the ground level and high up. The brick facing of the whole is very neat, the bricks being of the usual triangular form, 13 inches long, and $1\frac{1}{4}$ to $1\frac{1}{2}$ thick, with joints from $\frac{3}{8}$ to $\frac{5}{8}$ inch. All over the wall, in three tiers, there are series of what appear to be relieving arches, in one, two, and three rings of 2 feet tiles; but these, like the rest of the brick-facing, merely enter the wall to a depth of a few inches, and are of no structural use. Nor can they have been meant for ornament, as the whole of the brick facing was concealed from sight. The drum or rotunda was divided into three stories by cornices, partly of marble and partly of large tiles covered with mouldings made of marble dust stucco—once painted and gilt. The two upper stories of the exterior were coated with stucco, but the lowest story, which is the largest of the three, was lined with slabs of white marble, which have been completely stripped off the circular part of the Pantheon, but still exist on the square projection against which the Portico stands; this is the finest example which still remains in Rome of the use of marble as a wall lining.

The square projection is divided vertically by fluted Corinthian pilasters, and horizontally by two sculptured bands or friezes, richly decorated with reliefs of garlands hanging between candelabra. The plain wall surface is covered with slabs of Pentelic marble, $5\frac{1}{2}$ inches thick, some of which are 11 feet long by 3 feet 2 inches wide. A small door on each

side, with moulded architrave, leads to a staircase formed in the thickness of the concrete wall. And six similar doors in the circular part lead each into the semicircular recesses, mentioned above (see fig. 37). The other similar small chambers at higher levels have no apparent means of access, as their doors open high above the ground.

Against the rectangular projection is set the very noble Portico, with eight columns on its front and three at the sides; they are unfluted monoliths of gray and red Egyptian granite with Corinthian capitals of white Pentelic marble. The columns at AA on the plan are restorations of the time of Urban VIII. and Alexander VII., and the arms of these Popes are introduced among the acanthus leaves of the capitals.

The frieze of the entablature is plain, except for the inscription, which records the dedication of the Pantheon by Marcus Vipsanius Agrippa during his third Consulate, that is in 27 B.C.

The letters were of bronze, but only the *matrices* now remain—M · AGRIPPA · L · F · COS · TERTIVM · FECIT.[1]

Another inscription added on the architrave records a restoration of the building by Severus and Caracalla in A.D. 202.[2] The pediment is much higher in proportion to its width than it would be in a Greek building; this may have been partly in order to give additional space for the bronze relief of the *gigantomachia* in the tympanum.

On each side of the great doorway is a niche which

[1] Agrippa thus settled the question as to whether *tertium* or *tertio* was more correct, though Cicero had declined to do so in a similar case (see p. 295, note).

[2] The Pantheon had previously been restored by Domitian and Hadrian, who used it as a Court of Justice; see Roncalli, *Chron.* ii. col. 197, 243; Spartian. *Hadr.* 181; and Dion Cass. lxix. 7. Hadrian also built a Pantheon at Athens; see Pausanias, *Attica*, 18, 9.

originally contained a colossal statue—Agrippa on one side and Augustus on the other.[1]

Strange to say, the bronze doors of the Pantheon escaped the thefts both of Eastern emperors and of mediæval popes, and are still well preserved—the noblest existing specimens of Roman bronze work on a large scale. On each side of the doors are bronze fluted pilasters with Tuscan capitals enriched with egg and dart moulding. Above is an open bronze screen of a simple and very commonly used ancient pattern.

The doors themselves are framed with large plates of cast bronze, having a *cyma recta* moulding round the panels; the *styles* and *rails* are decorated with rows of bosses enriched with foliage; the whole doors, in design and detail, resemble the other ancient bronze doors in Rome—those of the Temple of Romulus and those of the *Curia*, now at the end of the Lateran Basilica (see page 265).

The Portico is paved with large slabs and roundels of Egyptian granite; a great part of this floor probably dates from the time of Agrippa.

The internal walls of the Pantheon were magnificently decorated with wall linings of Oriental marbles and porphyry, and columns in two orders supporting entablatures. What now exists is of the ancient materials, but the design has been somewhat altered, and the marbles of the upper order are replaced with stucco.[2]

Many large and magnificent fluted columns in front of the internal series of recesses still exist, made of the rich Numidian *giallo antico;* the smaller columns by the modern altars are of granite, red porphyry, and *giallo.* Many other richly-coloured marbles are used in the panelling of the walls, contrasting

[1] It is possible that the statue of Agrippa is that which now exists at Venice in the Museo Civico; it was found in Rome, and sent to Venice in 1505, by the Cardinal Domenico Grimani.

[2] The older marble decorations of the interior are shown in one of Piranesi's fine etched plates.

vividly with the white Pentelic marble of the capitals and entablature; the chief marble used for the wall slabs is the Phrygian *Pavonazetto.*

The floor is paved with large slabs and roundels of a great variety of materials, granite, porphyry, *porta santa*, *pavonazetto*, *giallo*, and *rosso antico*, and in this the old design probably still survives. Little, if any, of the internal decorations are probably as early as the time of Agrippa, but may belong to the extensive restorations which were carried out by Hadrian and Severus, when the use of porphyry and coloured Oriental marbles was very common, while in the reign of Augustus these magnificent and costly materials were only beginning to come into use. The whole building, both the rotunda and its Portico, was built on a raised stylobate of massive blocks of travertine lined with white marble, with a moulded cornice and plinth.[1]

The preservation of this building is mainly due to the fact that about the year A.D. 608 the tyrant Phocas presented it to Pope Boniface IV., who consecrated it as a church under the title of S. Maria ad Martyres.

The Thermæ of Agrippa were the first public baths of Rome; they were first opened in 21 B.C., and were of enormous extent and extreme splendour both in design and material. They were decorated with a great number of fine statues, among which Pliny specially mentions the *Apoxyomenos*[2] of Lysippus, which was enthusiastically admired, so that when Augustus removed it to his palace, substituting a copy, he

[1] For further details about the Pantheon, see Hirt, *Das Pantheon*, Berlin, 1807; Adler, *Das Pantheon*, Berlin, 1871; Maes, *Il Pantheon*, Rome, 1881; Nispi-Landi, *Il Pantheon*, 1882; Geymüller, *Documents inedits sur les Thermes d'Agrippa*, Lausanne, 1883; and *Notizie degli Scavi*, 1882.

[2] An Athlete in the Bath, scraping the oil from his arm with a strigil; a fine ancient copy—possibly the one substituted by Augustus—is now in the Vatican.

was forced by indignant public opinion to put it back in its place in front of the Thermæ.

The Thermæ were altered and largely restored after a fire by Domitian; then by Hadrian (Spartian, *Hadr.* 18); and again, after another fire by Severus and Caracalla.

It was specially to supply these *Thermæ* that Agrippa constructed the aqueduct which brought to Rome the pure cool water of the *Aqua Virgo* (see p. 470).

The greater part of the immense Thermæ of Agrippa is concealed by several streets of houses, but a plan of the whole baths, then much more perfect, was made by Baldassare Peruzzi early in the sixteenth century, for the Count of Pitigliano, who purposed making the ruins into a magnificent palace.[1]

The removal in 1881–2 of the row of houses which had been built against the back of the Pantheon, brought to light remains of a grand hall (see fig. 37), with fine fluted columns of Phrygian *pavonazetto* and a rich entablature of Pentelic marble, with a sculptured frieze decorated with reliefs of dolphins and tridents, part of which has been refixed in its original position. The whole walls were lined and the floor was paved with Oriental marbles. On the side towards the Pantheon an apsidal recess, with a pedestal for a large statue, was added by Hadrian, who also appears to have enlarged the doorways at the ends of the hall.

Remains of a vaulted roof were found, apparently of the time of Severus; in its original state it seems probable that the hall was open to the air. It possibly was a *xystus* or place for athletic exercises (see Vitruv. v. 11), or else part of the *frigidarium*.

The original *Thermæ* of Agrippa extended southwards as

[1] A good plan of the whole was published by Palladio in his *Therme dei Romani*, 1st. ed., printed in London, 1732. That given by Canina is very inaccurate and misleading; the existing remains are shown in the *Notizie degli Scavi*, 1882, p. 357 *seq.*

far as the *Arco della Ciambella*, but did not include the circular hall; this and the part beyond it were an addition by Severus.

Some of the bricks of the later part are stamped OPVS · DOL*iare* DE · PRAEDIS · AVG*usti Nostri* EX · FIGL*inis* VET · CAEACILIA · AMANDA · DE · LIC. The *Prædia* (estates with clay pits) *Liciniana* are known to have belonged to Sept. Severus.

Other additions by Severus extended on both sides of the Pantheon, and must have concealed the greater part of its rotunda; these were partly destroyed in the demolitions of 1881–2.

Other very extensive *Thermæ* stood near those of Agrippa, and extended over a large area towards the Stadium of Domitian (Piazza Navona).

These were originally built by Nero under the name of the *Thermæ Neronianæ* (see Martial, ii. 48–8; vii. 34–5, and xii. 83–5; and Statius, *Sylv.* I. v. 62), but were restored and enlarged by Severus Alexander about the year 229, and their name was then changed to the *Thermæ Alexandrinæ* (Hist. Aug. *Sev. Alex.* 25; Aur. Victor, *Cæs.* 24). Extensive remains of these *Thermæ* exist under the houses on the west side of the piazza of the Pantheon, and under the Palazzo Giustiniani, the Palazzo Madama, and the Church of *S. Salvatore in thermis*, so called from its position amid the ruins of these baths.

One part only is now visible above ground, an apse in the stable of an inn in the Piazza Randanini. A complete plan of these *Thermæ* is given by Palladio in his work on Roman Baths, but it is probable that part of this was a conjectural restoration.

Owing to the chief remains of the Golden House of Nero being below the *Thermæ* of Titus, it will be convenient to describe them together.

In A.D. 65 occurred the great fire, lasting nearly six days, which completely burnt three of the *Regiones* and parts of seven more, leaving only four untouched: Tac. *Ann.* xv. 39–40.

In this fire the first Palace of Nero, called the *Domus transitoria*, was destroyed, and Nero immediately commenced to build a palace of such size and magnificence as probably has never either before or since been rivalled.

It is very difficult now to realise its actual extent, reaching as it did from the south-eastern part of the Palatine over the Velia, the whole valley of the Colosseum, and a large extent of the Esquiline, the whole of which district had been devastated by the fire.[1]

The palace was a mile in length, and included large gardens, and parks with animals, surrounded by triple colonnades. The interior was decorated in the most lavish way, with gold, precious stones, and ivory: see Tacitus, *Ann.* xv. 42; and Suet. *Nero*, 31. Some rooms, according to Suetonius, were entirely plated with gold and studded with pearls and jewels. The supper rooms were vaulted with ivory panels, from openings in which flowers and perfumes were scattered on the guests. The walls of the chief banqueting-room, a circular hall (*Cœnatio rotunda*), were made to revolve by means of machinery, in imitation of the movement of the heavens.

The baths of the palace were supplied with three kinds of water—that brought by the Claudian Aqueduct, which Nero extended to the Cælian and Palatine Hills; secondly, the *Aqua Albula*, from a warm mineral spring below Tivoli; and thirdly, sea-water. In order to pay for these extravagances Nero did not hesitate to strip many of the temples in Rome of their rich offerings and statues of gold and silver (Suet. *Nero*, 32), and resorted to other equally disgraceful ways of raising money.

An enormous number of works of art were collected or

[1] It appears very probable that, as Tacitus and Suetonius assert, the fire was wilfully caused by Nero, who thus not only cleared a site for his palace but also was enabled to lay out the new city with increased regularity and magnificence, and to bring into immediate effect the provisions of his Metropolitan Building Act (see p. 40).

made for the *Golden House*. The most conspicuous of these was the bronze colossus of Nero, decorated with gilding, the work of the Greek sculptor Zenodorus, which, according to Pliny (*Hist. Nat.* xxxiv. 8), was 119 feet high (see page 327).

Nero also had a portrait of himself painted on canvas, 120 feet high, which Pliny says was afterwards destroyed by lightning: *Hist. Nat.* xxxv. 33.

The Golden House contained so many pictures by the famous painter Fabullus, that Pliny calls it "the prison of his art"— *carcer ejus artis domus aurea fuit: Hist. Nat.* xxxv. 37.

A Temple to Fortune, called the *Ædes Seia*, founded by Servius Tullius, existed within one of the great enclosures of the *Golden House*, and this Nero rebuilt with a brilliant translucent stone, then recently discovered in Cappadocia, which from its shining qualities was called *Phengites:* Pliny, *Hist. Nat.* xxxvi. 46.

Remains of the *Golden House*, in addition to those described below as being under the *Thermæ of Titus*, exist along that part of the Palatine which faces on the *Sacra Via* in its course from near the *Meta Sudans* up to the Arch of Titus. These remains consist of a long series of vaulted rooms, three and four stories high, which stand against the cliff of the Palatine. Other similar rows of rooms exist on the other side of the *Velia*, facing on the Temple of Venus and Rome. These buildings are of concrete, faced with very neat and regular brickwork, and are set on very massive foundations of concrete made of lava, part of which have been cut away, evidently with great difficulty, when the baths (attributed to Heliogabalus) were built along the *Sacra Via*.

A large portion of the Esquiline called the *Mons Oppius*, which had been occupied by part of Nero's gigantic *Golden House*, was restored to public use by the construction on it of the *Thermæ of Titus;* Suet. *Titus*, 7; and Mart. *De Spec.* 2. The main part of the *Thermæ* was on the summit of the Esquiline, but its enormous *peribolus*, or outer enclosure, extends

far over the lower slopes of the hill, and is raised to the level of the rest by a number of long and lofty walls, set near together, forming substructions on which the great platform of the *peribolus* rests. On one side of the enclosure was a large theatre, forming a semi-circular projection (see fig. 39). The substructions of this consist of a series of long and lofty vaulted chambers, running in two directions, the walls of which cut through Nero's palace, rendering its rooms dark and useless, but at the same time saving them from complete destruction.

The comparatively small bit of the *Golden House* which is thus preserved consists of part of a large *peristyle* or open quadrangle, with a colonnade round three sides, on to which a series of rooms opened.[1]

Those on the west side are small, with very simple decorations painted on the stucco, and show signs of having been built rather hastily, without much regard for neatness or finish. The walls are of concrete faced with mixed brick and *Opus reticulatum;* the latter is very rudely cut, and the brick facing is unlike any other example in classical Rome, having bricks of extraordinary thickness mixed with others of common sizes in a very irregular way. Some bricks of the unusual thickness of $2\frac{1}{2}$ inches are set in the same course with others of $1\frac{1}{2}$ inch thick.[2]

Traces of a number of wooden staircases and upper floors exist along this line of rooms; the positions of these are shown

[1] These interesting remains of Nero's palace, and the substructions under the theatre of the *Thermæ* have been cleared of rubbish, and are now accessible.

[2] In other cases the brick facing of Nero's time was of remarkable neatness and beauty; especially in his extension of the Claudian Aqueduct, in which the surface was not hidden by stucco. This immense diversity of work during the same reign shows that great care must be taken in judging the dates of Roman buildings from the appearance of their brick-work.

by the holes in the walls for the wooden joists or raking bearers of the stairs, and also by the profile of the wooden

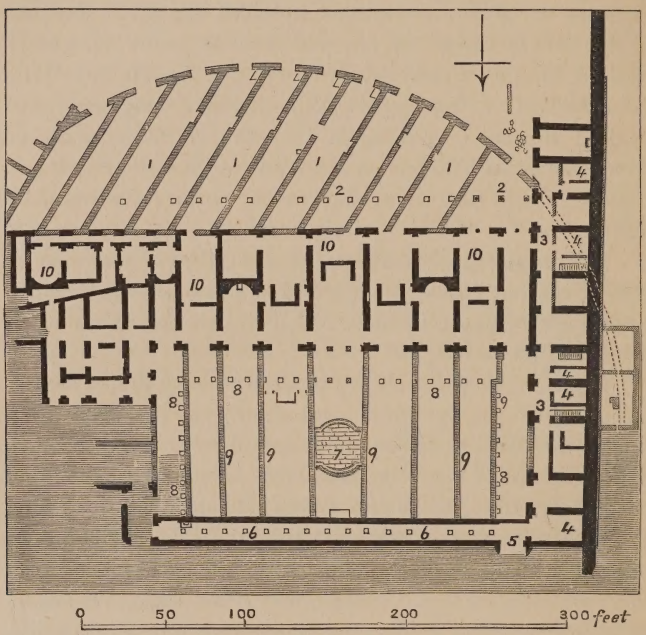

Fig. 39.

Part of the Golden House of Nero, and the substructures of the Baths of Titus, which cut through it.

The black shows Nero's work, the shading that of Titus.

1, 1, 1. Long parallel walls built by Titus to support the theatre above (see No. 6 on fig. 40).

2, 2. Existing remains of the peristyle of Nero's house.

3, 3. Passage.

4, 4. Slaves' rooms in Nero's palace.

5. Remains of a mosaic floor earlier than Nero's time.

6. Long passage behind Nero's peristyle.

7. Fountain in the middle of the peristyle.

8. Second row of columns of do.

9, 9. Walls added by Titus to support the building above; these cut up the palace of Nero into long dark strips.

10, 10. Handsomely-decorated halls in Nero's palace.

steps being marked on the stucco of the wall. These walls, and all the others which belong to the *Golden House*, have their surface thickly studded with marble plugs and iron nails to hold the stucco or cement backing for the marble slabs; and are easily distinguishable from those of the *Thermæ*, which were left bare of any covering, and therefore have no plugs inserted in the brick facing.

The rooms on the south side of the *peristyle* were much more handsomely ornamented, both with pavements and wall linings of polished Oriental marbles, of which pieces still remain *in situ*, some even preserving their original high polish. The vaults and upper parts of the walls were very richly decorated with stucco reliefs, picked out with gold and colours, and among them well executed paintings, both figure subjects and graceful arabesques, treated with wonderful invention and spirit.[1]

Very few of these now remain, and they are rapidly perishing from combined damp and exposure to air. It was the discovery of similar paintings among these and other ruins of ancient Rome which, in the reign of Julius II., gave a strong impetus to the classical revival, and supplied Raphael and his pupils with new motives for mural decoration, with combined colour and relief, such as those in the loggie of the Vatican and the even more splendid Villa Madama.[2]

Figure 39 shows how the *peristyle* of Nero's *Golden House* is now cut up into narrow strips by the long vaulted chambers of Titus's substructions.

[1] A number of paintings, now lost, are illustrated by Mirri and Carletti, *Terme di Tito*, 1776; and De Romanis, *Terme di Tito*, 1822.

[2] The Villa Madama, on the slopes of Monte Mario, about 2 miles outside the Porta Angelica, was designed by Raphael for Card. de' Medici (afterwards Pope Clement VII.), and was decorated by Giulio Romano, Fran. Penni, and other pupils of Raphael, after their master's death, with the most gorgeous series of delicate reliefs in stucco, covering both walls and vaults with a profusion of elaborate designs far exceeding in splendour the loggie of the Vatican. This wonderful but unfinished palace is now empty, and is rapidly falling into decay; it is the property of the ex-king of Naples.

In the centre of the peristyle a large *piscina* or marble-lined fountain still exists, and beyond it is the pedestal for a statue. At one point, at the north-west angle of the existing remains, at a level below the floor of the *Golden House*, is part of some mosaic pavements belonging to one of the many houses which Nero destroyed to clear a site for his palace. It is a characteristic specimen of early mosaic with simple patterns in white and gray, formed with small and very closely fitted *tesseræ*.

On the higher part of the Esquiline, at some distance to the north-east, is a large *Castellum* or reservoir, built originally to supply the *Golden House*, and used afterwards by Titus for his *Thermæ*. It is a large concrete and brick structure divided by parallel walls into nine long vaulted chambers; it is two stories high, though at present the lower one is choked up with rubbish. In each wall there are four openings like door-ways. arranged so as not to be opposite to each other, in order that the water in its course from the first chamber to the last might have to run in as devious a course as possible, and thus deposit any sediment it contained before it passed out of the last chamber in the lower story, having in turn run through the whole eighteen subdivisions of the cistern.

The internal walls are covered with waterproof stucco made of pounded brick and potsherds (*Opus signinum*), and over this the water, in course of several centuries, has deposited a succession of thin layers of carbonate of lime, which is always seen where the water supplied to Rome was stored or conveyed. The front of this *Castellum Aquarum* was decorated with rows of columns between semi-circular niches lined with marble. Another building, now destroyed, appears to have adjoined this reservoir, as there are remains of a mosaic pavement extending in front of it.[1]

[1] Ficoroni in his *Vestigj di Roma* describes the lower story. This reservoir is now called the *sette sale*, in spite of its consisting of nine not seven chambers.

The whole of that part of the *Golden House* which exists below the *Thermæ* of Titus is set at quite a different angle from the latter, as can easily be seen by comparing the direction of the parallel walls, which fill up the curve with those of the palace (see fig. 39).

The walls of the substructions of the Thermæ are of concrete faced with very neat and regular brickwork, mixed in parts with *Opus reticulatum*, which is used sparingly in large panels 6 feet high, and about 16 feet long. The bricks average in thickness rather more than $1\frac{1}{2}$ inch, with joints barely $\frac{1}{2}$ inch; the extreme beauty and evenness of this brick-work is a great contrast to that in the adjoining walls of Nero's palace.

The *Opus reticulatum* is also cut and set with perfect regularity. The walls, where they come over Nero's peristyle, were not stuccoed, and consequently they have no marble or iron plugs, but the long vaulted chambers in the projecting part of the curve were stuccoed, and are thickly studded with iron. These various chambers below the Theatre and in other parts of the substructures were no part of the public *Thermæ*, which were a separate building on the higher level of the Esquiline; the lower rooms were probably used only as store-rooms, or possibly for the numerous slaves who were attendants in the Baths. Many of these chambers have no means of lighting, and are perfectly dark.

Fig. 40 shows the plan of the *Thermæ of Titus*, at the higher level above the substructions, and remains of the *Golden House* described above.

Only the part shown black is now visible: the rest of the plan is taken from Palladio's book on the Roman *Thermæ;* very much more remained fairly perfect in his time (middle of the sixteenth century), and even as late as the last century many fine rooms existed which have now completely disappeared.[1] It is, however, probable that excavations will some day bring to light the whole plan of the *Thermæ*, and possibly many

[1] See Piranesi's Etchings.

fine mosaic pavements and pieces of sculpture.[1] The whole ground over the buried parts, now cultivated as vineyards, is thickly strewn with fragments of all sorts of marbles, granites, and porphyry, with countless *tesseræ* in glass and marble, and other fragments of rich decoration, all of which show that the *Thermæ* must have been a building of extreme magnificence.

The arrangement of the rooms in these *Thermæ* is very similar to that in the Baths of Caracalla, except that the latter had one immense circular domed hall, and the Baths of Titus had two of smaller size.

In both cases there is a large open *peristyle* on each side, and a grand central hall; this latter was probably the *Tepidarium*, the domed halls the *Laconica* or hot rooms, and the row of rooms which occupy the opposite side the *Frigidarium*, dressing-rooms, and *Elæothesia*, or chambers where bathers were anointed and perfumed.[2]

The *Thermæ* of Titus stand in the centre of a large *peribolus* or enclosure, on one side of which was the Theatre, resting on the vaults of the substructions described above. At the corners of the same side were stairs leading up from the lower level of the slope; and by them two *exedræ*, or apsidal recesses, with tiers of seats for loungers or literary discussions, reading of new poems, and the like. Similar but larger *exedræ* opened on the opposite side of the peribolus, and one of these is still in good preservation; behind it is a passage concentric with

[1] The celebrated group of Laocoon and his sons, now in the Vatican, was found here during excavations made in 1506. Pliny (*Hist. Nat.* xxxvi. 4) mentions this group as being in the Palace of Titus, which probably adjoined the *Thermæ*. He says it was the work of three Rhodian sculptors called Agesander, Polydorus, and Athenodorus, and was cut out of one block of marble: this is not the case; it is really made of three blocks very skilfully united.

[2] The use of perfumes was carried so far by the Romans that they not only scented the water in the baths and poured perfumes on the bathers, but they even rubbed scented oil on the walls of the building: see Suet. *Cal.* 37; and Pliny, *Hist. Nat.* xiii.

the apse, and a staircase leading up to a higher story. Other existing portions are indicated on the plan.

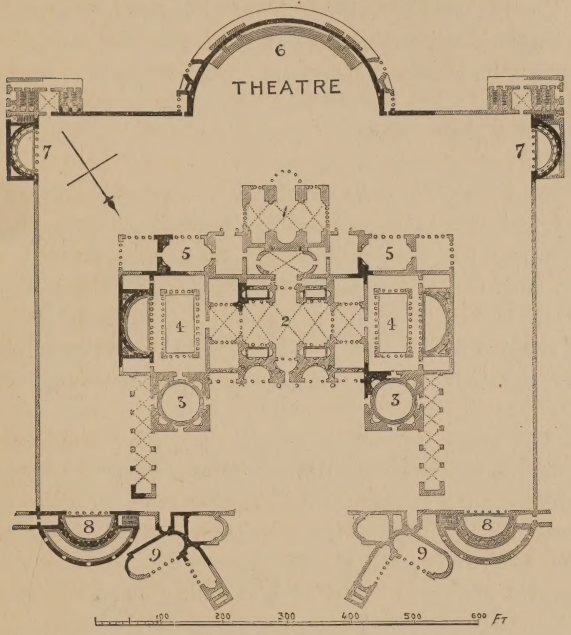

Fig. 40.

Plan of the Baths of Titus, at the higher level.

1. Frigidarium.
2. Tepidarium.
3, 3. Two laconica or hottest rooms.
4, 4. Open peristyles.
5, 5. Dressing and anointing rooms.
6. Theatre; this is over the structures shown in fig. 39.
7, 7 and 8, 8. Exedræ.
9. Remains of Nero's palace set at a different angle from the baths.

The *Thermæ of Trajan* appear to have stood almost adjoining the *Thermæ of Titus*, at the northern angle of the *peribolus*. They are mentioned in a long inscription printed by Orelli, *Inscr.* 2, 591; by the Curiosum *Reg.* iii.; and by Anastasius

Bibl. *Vita Pont. Symmachi.* The latter writer mentions them as being by the Church of S. Martino ai Monti.

These *Thermæ*, of which little or no remains are now visible,[1] were much smaller than those of Titus, and were intended for women only, for whom there appears to have been no provision in the larger ones : see Roncalli, *Chron.* vol. ii. col. 243.

A plan of the *Thermæ of Trajan* is given by Palladio under the name of the *Baths of Vespasian.*

The Baths of Caracalla are shown by some of the stamps on the bricks, dated 206, to have been begun during the lifetime of Severus, but were mainly built by his son Caracalla (see Hist. Aug. *Carac.* 9), completed by Heliogabalus and Severus Alexander, 218 to 235 (see Lamprid. *Hel.* 17, and *Alex.* 25), and restored by Theodoric[2] about A.D. 500. In size and state of preservation combined, few if any Roman buildings surpass these great Thermæ ;[3] the building is also of great value as affording many interesting varieties and details of methods of Roman construction. Unfortunately, it is impossible to identify the uses of many of the chambers, and but little help is afforded by Vitruvius, as his description of Roman baths refers rather to the older and smaller class of *Balneæ* than the more extensive *Thermæ* of which Agrippa built the first example.

The whole building, including its great *peribolus* or outer enclosure, is constructed on a large platform raised about twenty feet above the natural ground level. This platform consists of a great number of vaulted chambers, which extend under the whole of the main floor of the Baths. These were

[1] The remains of some classical building below the level of the present Church of S. Martino are later in date than the time of Trajan.

[2] The brick-stamps of Severus and Caracalla usually have OP · DOL · EX · PRAED · DOM · N.N · AVGG (or DOMINI · N · AVG), with, in addition, names of the potters. Those of Theodoric have REG · D · N · THEODE · (*regis domini nostri Theoderici*) RICOBONO · ROME.

[3] According to Olympiodorus these Thermæ contained marble seats for 1600 bathers : *Olymp. Ap. Phot. Bibl.* 80, p. 63, Bekker.

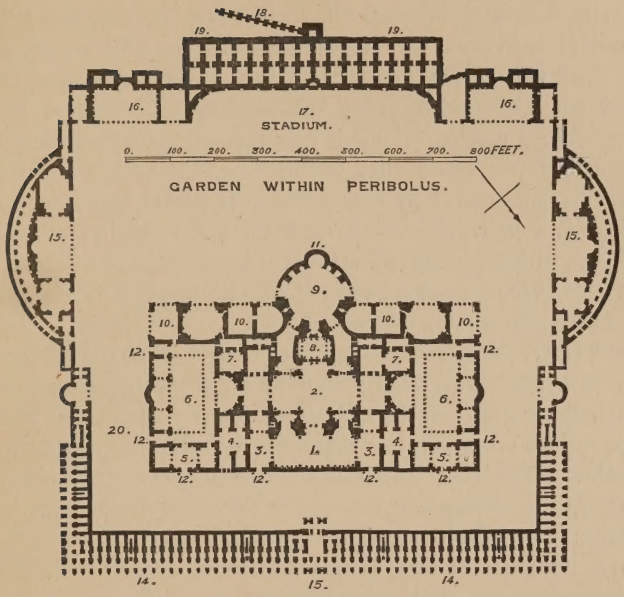

Fig. 41.

Plan of Baths of Caracalla.

1. Frigidarium and swimming-bath.
2. Tepidarium.
3, 3. Anterooms to do.
4, 4. Passage-rooms, *Apodyteria*, and two grand staircases.
5, 5. Large entrance halls.
6, 6. Large open peristyles.
7, 7. Rooms with hot baths.
8. Antechamber to the Calidarium.
9. Great domed hall—Calidarium.
10, 10. Row of rooms on each side of do., some with warm baths.
11. Apse of Calidarium.
12, 12. Entrances to the Baths.
13. Entrance to the outer peribolus.
14, 14. Rows of small chambers and long porticus.
15, 15. Large halls, lecture-rooms, libraries, and xysti for exercise.
16, 16. Similar halls on the south side.
17. The Stadium.
18. Aqueduct.
19, 19. Reservoir.

partly excavated between 1850 and 1870, but unfortunately were filled in again with rubbish, and are not now accessible. A small villa of the time of Hadrian was partly destroyed by Severus, and buried under the south-eastern part of the *peribolus;* a portion of this is now exposed. Its pavement is about 20 feet below that of the *Thermæ.* It has a small Atrium, surrounded by rooms once two stories high; one of these is a well-preserved example of a *Lararium* or private chapel, with a pedestal for statues of the Lares. The columns of the Atrium are of concrete, faced with moulded bricks and covered with painted stucco.

The very numerous rooms which extend below the *Thermæ* of Caracalla were probably used by the crowd of slaves who attended on the bathers, and also for storage of fuel, oil, and for various other purposes connected with the working of the baths. This crypt contained also the furnaces (*præfurnia* or *propnigea*, πρὸ πνιγεύς) for heating the water and hot rooms above. Two staircases down to this lower level are still accessible; one of these is a very narrow stair formed in the thickness of one of the piers which supported the great dome of the *Laconicum;* it descends to the furnaces of the *hypocaust* under the dome, and also appears to have gone up to the top of the building: near it a broad staircase descends to another part of the lower chambers, close by one of the apses which adjoin the round hall.

Other stairs, lined with marble and porphyry, existed on each side near the entrance by the great swimming-bath; and at the side of the two apses of the swimming-bath steep narrow stairs, formed in the thickness of the wall, ascend to the summit of the building, which was once very lofty. The smaller rooms appear to have been from two to three stories high, but the three great central halls probably occupied the whole height of the building, and had no floor over them, thus cutting the upper floor into two parts; in order, therefore, to give access from one half to the other a number of narrow passages

are formed high above the ground in the thickness of the walls, probably only for the use of the attendant slaves. This system of connecting passages is rather complicated, as the upper floors were at different levels. In some cases one of these passages issued from the face of the wall, and was continued in an upward direction by a wooden stair supported on stone corbels against the face of the wall; at the top of this the passage again entered the thickness of the wall. Unfortunately none of these upper floors still exist, though large masses of the vaulting with mosaic pavement on the top of it are scattered about the building. The under sides of the vaulting were decorated in various ways, with moulded stucco in panels, decorated with figure subjects or arabesques in relief, all painted and gilt; others had brilliant glass mosaics or painting on the flat. The floors were mostly of mosaic, with coarse figures of athletes, gladiators fighting with beasts, or tritons and dolphins, all rudely executed with large *tesseræ*, and usually drawn in the most clumsy and inartistic way possible. Some few of the simple patterns which framed these figure subjects are graceful and more delicate in style. The materials used for these mosaics on the ground floor are very rich and various; green and red porphyry and a great number of different foreign marbles are used with much ingenuity, so as to produce realistic pictures.

The mosaics on the upper floor are in white and gray only, and appear to have mostly had large figures of marine subjects—tritons, fish, and the like—worked in gray (lava) tesseræ on a white marble ground.

Some of the ground-floor mosaics were of a very elaborate sort of *opus sectile*, with patterns formed not of small square *tesseræ*, but of thin slices of porphyry and marble, shaped into patterns, with flowing lines and leaf-shaped ornaments, each piece fitted with great accuracy to the next, a much more expensive and elaborate method of mosaic work than the *opus tesselatum*.

An immense number of *tesseræ*, made of glass in very brilliant colours, of almost jewel-like appearance, are strewn about the building. These glass mosaics were used for the walls or vaults, not for pavements.

The greater part of the walls were lined with thin slabs of porphyry, and coloured marbles in great variety; nearly all the kinds mentioned in Chapter I. were used in this magnificent building. The columns were mostly monoliths of red porphyry, gray and red granite, or coloured marbles. A piece of a large column still exists in the building, made of the magnificent Egyptian alabaster, the *onyx* of Pliny, which in his time was rare and extremely valuable.

The uses of the chief rooms have been determined by the excavations of recent years.

In the centre of the north-east side is a large hall originally covered by three bays of quadripartite vaulting, which appeared to spring from eight immense monolithic columns.[1] The floor of this hall, which was part of the *frigidarium*, was mostly occupied by an immense cold swimming-bath (*natatio*) about 4 feet deep, with a long flight of marble steps at each end.

A row of columns separated the main part of the *frigidarium* from a vestibule at each end, in which were two entrances from the outer court.

Adjoining the *frigidarium*, in the centre of the building, is the *tepidarium*, a very large and once magnificent hall, groined, in a similar way, in three bays of quadripartite vaulting resting on eight columns.[2]

Four large recesses in the sides of the hall contain each a marble-lined bath, and other vaulted recesses open, one into

[1] The *frigidarium* is placed on the north-east side and the *calidarium* on the south-west, as Vitruvius recommends.

[2] One of the large halls in these baths, called the *Cella Soliaris*, according to Spartianus, had a magnificent ceiling formed of interlaced bars of gilt bronze.

the *frigidarium* and the other into part of the *sudarium;* at each end is a large vestibule, separated by columns and screens from the main *tepidarium.* Figure 42 shows this hall, which is 170 feet long by 82 wide, with its groined roof springing

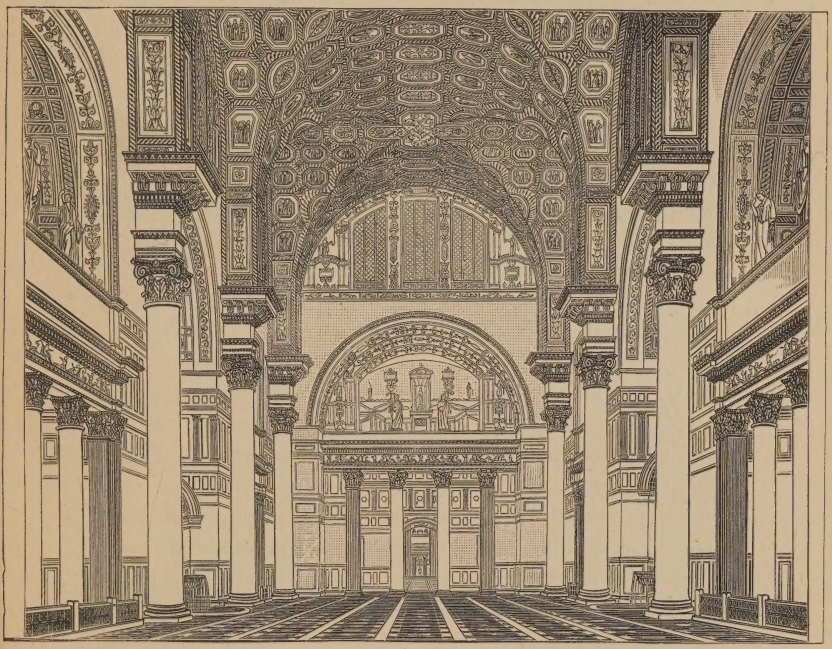

Fig. 42.

Interior of Tepidarium in the Baths of Caracalla, restored from existing indications.

from immense columns of granite and porphyry, each surmounted by a short piece of entablature, which merely returns round the capital of the column in the debased fashion of the second and third centuries. The smaller columns on each side were set in front of the recesses containing the warm baths.

The next room southwards forms a sort of vestibule to the circular hall, and contains two marble-lined baths for hot water; it is part of the *sudarium* or sweating-room, and could be raised to a very high temperature, as it has a hypocaust floor and its walls were lined with flue tiles. This is also the case with the great circular hall, the *Laconicum*, which was of immense height, and was covered by a dome. A number of recesses round this hall contained hot baths, each with a *hypocaust* furnace under it and a lining of flue tiles.

On the side away from the main building was an apsidal recess, as in the Pantheon, to which this *Laconicum* had some resemblance, except that its dome was raised to a great height, while in the Pantheon the dome springs from a very moderate height above the floor. One pier only of the *Laconicum* exists as high as the springing of the dome,[1] and the walls of the apsidal side are almost destroyed down to the ground level. The remains of the apse and the walls near it have only been recently discovered, and consequently Palladio's and subsequent plans are incorrect in this part, as they show the projecting part of the great rotunda as if it were a repetition of the opposite side. The pavement of this hall is a rude restoration, probably of the time of Theodoric, with large roundels of granite, and a number of incongruous pieces of marble carelessly fitted together. A large number of fluted pilasters, taken from some earlier building, have been used during this restoration; they were laid with their faces downwards, and the print of the fluting is clearly visible on many parts of the cement in which the marble was bedded.

On each side of the circular Hall are four handsome and lofty chambers, of which the two angle rooms contain semicircular marble-lined baths.

[1] Near this pier and in other places are remains of walls which belong to more than one late restoration; the building appears to have suffered from earthquakes, and was probably much injured by that one which in the reign of Macrinus did considerable injury to the Colosseum (see p. 305).

These rooms appear to have been open on one or more sides to the surrounding gardens, their precise use is uncertain,

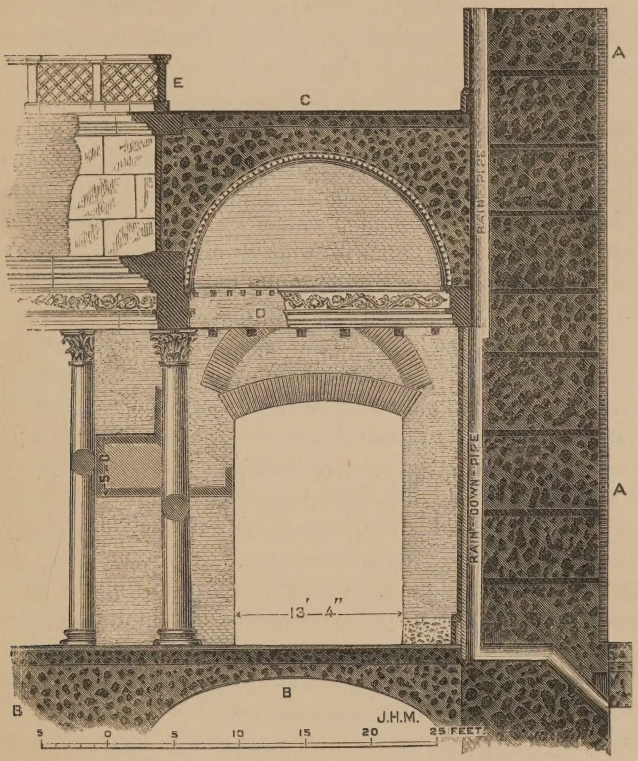

Fig. 43.

Baths of Caracalla: section through the peristyle.

A. Brick facing. B. Vault of Crypt. C. Upper gallery.
D. Marble frieze. E. Marble ballustrade.

they cannot have been part of the *Calidarium*, as they are too open to the air, and not sufficiently heated.

It has been suggested that these suits of rooms composed two sets of private baths, but that is not very probable.

Other rooms with *hypocausts*, wall flues, and hot baths, exist between the great apses of the *peristyles* and the last mentioned rows of rooms. The two great *peristyles* are very large and handsome, with ranges of columns all round, supporting a vaulted aisle or gallery (see fig. 43).

Each *peristyle* has a small porch at two of its angles, with an entrance from the outer *peribolus;* and at its north end a large and very handsome vestibule, vaulted in three compartments, with other entrances from the north. In all, there are eight doorways into the *Thermæ*, without counting the possible entrances between the columns of the eight southern rooms, and in this way a good deal of space is sacrificed to make large vestibules. On two sides of the *peristyles* are apsidal recesses, the larger of which has niches for statues.

The whole *peristyle* pavement was of tesselated mosaic, simple in design in the central open space and along three sides, and with figure subjects of athletes and gladiators in the large apses. It appears probable that the central open spaces of these courts were used for gymnastic exercises; the upper gallery would hold a large number of spectators, as well as the lower passage round the aisles.

Although it is possible to identify the uses of the chief parts of these *Thermæ*, a number of rooms remain which cannot be appropriated to any certain use. These were probably dressing-rooms (*Apodyteria*), and anointing rooms (*Elæothesia*).

The outer enclosure, which was nearly 1200 feet square,[1] was laid out with flowers and shrubs, and was surrounded by long lines of buildings, mostly the work of Heliogabalus and Severus Alexander.

The whole of the north-east side is occupied by a row of small vaulted chambers, forty in all, two stories high, with several staircases at intervals. In front of the row was a long covered *porticus;* and in the centre was the main entrance to

[1] The central block alone covers a larger area than the English Houses of Parliament together with Westminster Hall.

the *Thermæ* from the Via Appia, apparently the only one by which the public were admitted.

The use of these small rooms is doubtful; it is most probable that they were shops; another suggestion is that they were rooms for the attendant slaves; but they probably lived in the main block.

On the north-west and south-east sides of the *peribolus* are two sets of three halls, with a semi-circular colonnade or porticus behind, arranged in a very curious way. Other spacious rooms exist on the south-west side.

The larger halls have on one side an open colonnade, they were handsomely decorated with marbles and porphyry, and had many niches for statues; and in some cases tiers of seats against the walls. These were probably intended for the purposes mentioned by Vitruvius (v. 11), namely halls with seats for philosophers, rhetoricians, and other literary men and their pupils. Others again were rooms for exercise and games, *Ephebea*, *Conisteria*, and *Xysti*. Vitruvius in his description also mentions a *Stadium* where spectators might sit to watch the athletic sports.

This, in the *Thermæ* of Caracalla, occupies part of the north-west side; it had tiers of marble seats, with stairs at intervals, like an ordinary *Stadium*, except that one half was omitted.

Behind this is the great reservoir for the water supply of the baths; consisting of sixty-four small vaulted chambers, arranged in two rows two stories high, through which the water flowed, depositing its sediment in its course from chamber to chamber.

This reservoir was supplied by an Aqueduct, which enters it in the middle, in a diagonal direction, see fig. 41; it crosses the Via Appia, over the so-called *Arch of Drusus*,[1] which appears to be simply one of the arches built by Caracalla in a more

[1] This arch has been so-called for no better reason than the fact that the *Notitia* catalogues an *Arch of Drusus* in Regio i. or *Porta Capena*, which included this part of Rome.

ornamental way than the rest, as was commonly done where an Aqueduct happened to cross a road.[1]

This archway is of travertine lined with marble, and is decorated with columns on pedestals, and had an entablature surmounted by a pediment on each side. The details are all clumsy, and evidently much later than the time of Drusus. This Aqueduct was built by Caracalla to supply his *Thermæ;* it was merely a branch from one of the earlier Aqueducts—from the *Aqua Marcia*, according to the Einseidlen MS.

The foundations of the whole building are of concrete, made of broken lava, lime, and *pozzolana*, cast in the usual way between wooden framing; the upper parts of the walls are of tufa concrete, with the usual thin facing of triangular bricks, and single courses of large 2-feet tiles built in about every four feet, and passing through the whole thickness of the wall (see fig. 43).

The construction of the various arches and vaults is an interesting example of the Roman method of using the arched form without the principle of the arch. They were in all cases cast in one solid mass and had no lateral thrust. Some of the great vaults, especially that over the *frigidarium* and swimming bath, could not have stood for a moment if they had been built with true arches, as the thrust of so wide a span would have inevitably pushed out the unsupported wall on the north-east side.

The material used for the concrete of these immense vaults was pumice stone, selected for the sake of its lightness. The top or *extrados* of the vaulting appears to have been filled in level with the crown, so that the suspended mass of material is in places enormously thick; even at the thinnest place the larger vaults were nearly six feet thick.

The mosaic pavements of the upper rooms, which rest upon

[1] The aqueduct arches, used as doors in the Aurelian Wall, and now called the *Porta Maggiore*, and the *Porta San Lorenzo*, are examples of this; the former built by Claudius, the latter by Augustus (see pages 473 and 469).

these vaults, were formed thus—first, over the pumice stone concrete of the vault was laid a layer, 1 foot thick, of very hard concrete made of broken brick; on that another layer from 2 to 3 inches, of similar concrete, differing only in the brick being finely pounded like the *Opus signinum* used for aqueducts; last, come the *tesseræ* of the mosaic, bedded in fine white cement made of pounded marble (*Cæmentum marmoreum*). These different layers can easily be distinguished in the many large pieces of the vaulting which now lie scattered about the building.

The *suspensuræ* or hanging floors of the hypocausts are also formed with three layers of concrete; the lowest about ten inches thick, the next 5 inches, and then the marble tesseræ (see fig. 36). The *pilæ* are built of 8-inch square tiles bedded in clay, and usually 2 feet 6 inches to 2 feet 9 inches high. The under floor is formed of large tiles, *tegulæ bipedales*, laid on a thick bed of concrete.

In addition to the square flue tiles which line the hot rooms, circular socket-jointed pipes, bedded in the thickness of the concrete wall, are used to carry off the smoke from some of the hypocausts.

Rain-water down pipes are constructed at close intervals all through the concrete walls from top to bottom; these are about twelve inches square, carefully lined with tiles; they were hidden by the marble wall linings and their cement. The marble slabs which lined the walls were usually thin, varying only from 1 to 2 inches in thickness. They are all backed with a thick bed of cement, 4 to 6 thick, and this cement backing is studded with fragments of older marble slabs, often arranged roughly in squares, stars, and crosses. These were possibly inserted to give a number of plane surfaces for the men, who applied the cement wall coating, to work to, in order to get a perfectly even surface against which to fit the marble linings.[1]

[1] Modern plasterers in covering a wall with stucco form first of all a number of plaster strips called *screeds*, the faces of which are worked quite

The face of the brick lining is studded with marble and iron plugs to hold the cement backing, and the marble slabs were in many cases fastened by long iron or bronze clamps. Strong T shaped holdfasts of iron are used to fix the square flue tiles where they line the walls (see fig. 36).

Very little now remains of the marble, porphyry, and granite which once lined the *Thermæ* with wonderful variety of rich colours and decorative sculpture. A few Corinthian and Composite capitals still exist, and some pieces of the sculptured frieze which ran all round the two *peristyles*. These have large foliated scroll work, among which animals and Cupids are playing, very decorative in effect, especially when seen from a distance, but not executed with any refinement of detail. The sculpture is largely executed with the help of drills, and no trouble is taken to conceal this. The utmost effect was produced with the least possible labour, a remarkable contrast to the exquisite finish and minute detail of the sculptured decorations of the first century of the Empire, and even later, as is exemplified in the beautiful cornices of the Temples of Concord and Vespasian (see p. 214).

A great part of the marble decorations and numerous columns of these baths existed in their place as late as the sixteenth century, and many churches and palaces, both in Naples and Rome, were enriched with the spoils of this magnificent building. Enormous quantities of sculpture, engraved gems, and other works of art, were found in these *Thermæ;* among them the huge statue of Hercules, signed by the Athenian Glycon, a fine colossus restored as Flora, and the celebrated group of Dirce being fastened to the wild bull by her stepsons, the work of the Rhodian school. These are now in the museum at Naples.

true and even; they then fill in between these strips, using them to level the intermediate spaces. The Roman plasterers worked with a large sort of wooden trowel, exactly like the modern plasterer's *float*. This is represented on a painted wall found at Pompeii: see plate in *Ann. Inst.* for 1881.

Many gigantic *labra*, or baths cut out of a solid block of porphyry or granite, were found here. One is now in the Vatican, one at Naples, and two in front of the Farnese Palace.

In the Vatican and in the Lateran Museum are some of the mosaic pavements; in the latter is one very large mosaic, representing gladiators and athletes, of colossal size and the most ungraceful drawing. The last complete column was sent in 1565 to Florence, and now stands in the Piazza della Trinità.

Great injury was done to the building about the year 1534, by the Farnese Pope, Paul III., who not only took away its marble and columns, but even had the greater part of its brick facing picked off from the concrete walls that the broken bits of brick might be used to make concrete for the Palazzo Farnese.[1] The removal of this thin skin of brick shows, in a very striking way, how unimportant a part of the walls the skin of brickwork really is.

The building is well illustrated by Blouet, *Thermes de Caracalla*, Paris, 1828, but his plan is in some respects incorrect, as the whole area had not then been excavated.

The Thermæ of Diocletian were built on the Quirinal Hill, close up to the inner side of part of the Agger and wall of Servius Tullius, occupying nearly all the space from the *Porta Viminalis* to the *Porta Collina*. In the sixteenth century they were very well preserved, and their plan is recorded by Palladio in his work, *Therme dei Romani*. Though very much larger, yet in general arrangement these baths much resembled those of Caracalla, having on one side a large *frigidarium* and swimming bath (*natatio*), on the other a circular *laconicum* or hot room, and between them the *tepidarium*. At each end of the block was a large *peristyle*, open in the centre, and on the side by the domed *laconicum* a row of rooms of uncertain use; all these are similar to corresponding rooms in the *thermæ* of Caracalla,

[1] The stone used in the Farnese Palace was obtained by breaking down part of the external arcading of the Colosseum.

not only in position, but in shape and proportion, except that the circular *laconicum* appears to have been much smaller in the baths of Diocletian.

These enormous *Thermæ*, which accommodated 3200 bathers, about double the number provided for in the baths of Caracalla, were begun by Maximianus in the year 302, in honour of his absent brother Diocletian,[1] and were dedicated in 305 under the emperors Constantius Chlorus and Galerius Maximianus.

According to tradition a large number of Christians, who were afterwards martyred, were forced to work at the construction of these baths.[2]

The Latin and Greek libraries from the *Basilica Ulpia* of Trajan were moved to these baths; Hist. Aug. *Prob.* 2; and, like the other *Thermæ*, they contained an immense number of statues and busts, some of which are now in the Museum of Naples.

Like the baths of Caracalla these *Thermæ* still retained much of their magnificent marble linings, columns, and pavements as late as the sixteenth century; much that is now destroyed is shown by Du Perac in his *Vestigj di Roma*, the drawings for which were made in the first half of the sixteenth century. Their state in 1527 is described by Fulvio (*Antiquaria Urbis*, Venice, 1527), who gives a vivid account of their magnificence. A great part of the *Thermæ* was destroyed, and the rest stripped of its marbles by Sixtus V.; even the rooms of the extensive substructions, now wholly buried, were richly decorated with marble linings and pavements.

The great hall which formed the *tepidarium* was made by Michel Angelo into the Carthusian Church of S. Maria degli Angeli, during the reign of Pius IV. (1559-1566).

[1] Diocletian was but a short while in Rome; he had reigned twenty years before he paid his first visit to the ancient metropolis of his empire.

[2] There is no truth in the story that the bricks used in the walls are marked with a cross.

In 1740 alterations and additions were made, all in the worst possible taste. Even now the *tepidarium* forms one of the most imposing interiors in the world; it is about 300 feet long by 92 wide, vaulted in three bays with simple quadripartite groining, which springs from eight monolithic columns of Egyptian granite about 50 feet high and 5 feet in diameter. These have fine composite and Corinthian Capitals supporting a rich entablature, all of white marble, but now restored with stucco, and covered with whitening so as to hide their material.

The real bases of the columns are now buried about seven feet below the modern pavement, which was raised by Michel Angelo to its present level above the old floor; the apparent bases simply encircle the granite shafts like a ring.

Though the walls are stripped of their rich marbles, and the vault of its elaborate stucco reliefs brilliant with gold and colour, and the interior is disfigured with gaudy painting and clumsy figures, yet the noble size and well designed proportions of this immense hall, and the wonderful span of its simple but graceful vaulting, produce an effect of the utmost grandeur. One trace only exists on the vault of its original decoration, namely a number of gilt bronze rosettes arranged regularly in each compartment, these were probably intended as points of support for clusters of hanging lamps.[1]

One of the hot rooms or *laconica* is also well preserved, and is now used as the vestibule to the church. This is a circular domed hall, which originally had a circular opening in the crown of the dome like the Pantheon; the start of another circular or oval hall still exists on the outside of the building, and was probably a second hot room or *Sudarium*.

As in the baths of Titus and Caracalla the central block of

[1] The choir which projects from one side of the *Tepidarium*, and the chapel at each end, are eighteenth-century additions. The nave of the church, which is formed by the great hall, is set crossways instead of lengthways, on account of the long axis of the *Tepidarium* running nearly north and south.

Diocletian's *Thermæ* stands in the centre of a great *peribolus*, part of which still exists.

On the side opposite the hot chambers was a large theatre, like that in the enclosure round the *Thermæ* of Titus. This now forms part of the boundary of the modern Piazza de' Termini. The tiers of marble seats and their supporting vaults are now wholly gone, and only the outer semi-circular wall of the theatre with rows of niches for statues still exists.

At each angle of this side of the peribolus was a circular domed hall like a miniature Pantheon, the cupola decorated with sunk coffers (*lacunaria*).

One of these is now perfectly preserved, though stripped of its marble linings, and is used as the Church of San Bernardo; it was turned to this purpose in 1598, and was given to the Cistercian Monastery, which was built among the ruins of the *peribolus*.

As is the case with the domed *laconicum* of the main block, the central opening or *hypæthrum* is covered by a modern lantern.

About half the corresponding circular Hall at the opposite side of the *peribolus* still stands, built in among some modern constructions.

Other parts of the enclosure still exist, and among them five semi-circular apses or *exedræ* for lectures or philosophical discussions; Palladio shows a number of other rooms now destroyed, which were probably used for the same purposes as those round the *peribolus* of the *Thermæ* of Caracalla.

The methods of construction employed in the Baths of Diocletian are very similar to those of Caracalla's Baths.

In the same way the enormous vault, 92 feet in span, over the *tepidarium* is not a true arch, but is simply cast in one solid mass of concrete.

The brick facings, and especially the skin-deep brick arches, are much less neat than those in Caracalla's *Thermæ;*

the bricks vary in thickness from $1\frac{1}{4}$ to $1\frac{3}{4}$ inch, and the joints from half an inch to an inch.

The concrete of the walls is mostly made of broken bricks, and the vaults of tufa concrete.

The external cornices are mainly formed with projecting courses of tiles, supported at close intervals by travertine or marble corbels, and the whole was once covered with enriched mouldings worked in hard white cement, and decorated with gold and colours.

Till quite recently remains existed of an extensive *Piscina* or reservoir to contain the water supply for the *Thermæ*.[1] This stood outside the *peribolus*, close up to the ancient road which passed out of the *Porta Viminalis* in the Servian Agger, and, owing to the confined nature of its site, was triangular in plan. The vaulted roof of this curious building was supported on rows of pillars, standing in the water, like the large Roman reservoir which still exists in Constantinople.

The enormous Baths built by Constantine only a few years after these of Diocletian have now almost wholly disappeared. Extensive remains of these splendid *Thermæ* existed till the sixteenth century: see Palladio, *Therme dei Romani;* and Du Perac, *Vestigj di Roma.* The remains which then existed were mostly destroyed to clear sites for the Quirinal,[2] Rospigliosi, and Bentivoglio palaces.

The central block, of which Palladio gives a plan, in some respects resembled the older *Thermæ*, and had a huge central domed *laconicum* like that in the Baths of Caracalla; the Palazzo Rospigliosi occupies part of the site of this main block, and the whole enclosure extended over nearly the whole width

[1] These interesting remains, together with the greater part of the Servian Agger, have been destroyed by the enlargement of the railway station and other so-called improvements.

[2] An inscription, recording the restoration of these Thermæ by Petronius Perpenna, in the year 443, was found during the building of the Quirinal palace.

of the Quirinal hill, verging on its slope, which is now partly occupied by the gardens of the Colonna palace. The enormous fragments of a white marble Corinthian entablature which still are visible in these gardens probably belonged to the main western entrance of the *Peribolus*.[1]

One of these fragments is a piece of frieze, nearly 18 feet long, richly sculptured with cupids and birds among foliated scroll-work, very decorative in effect, but coarsely executed.

The so-called "Pediment of Nero," which is illustrated by Du Perac, Donatus, and other archæologists of the sixteenth and seventeenth centuries, appears to have been part of the *peribolus* of these Baths; its entablature and sculptured frieze resembled the fragments in the Colonna gardens.

The colossal statue of Constantine, now at the end of the Narthex of the Lateran Basilica, was found among the ruins of these *Thermæ*, and also two statues now by the Capitoline steps.

The two colossal figures of nude heroes holding their horses, which give the name to Monte Cavallo, once stood in some part of Constantine's Baths.

These magnificent groups are probably copies executed in Rome during the first century A.D., from bronze originals, the work of Lysippus or his school, in the reign of Alexander the Great. The treatment of the hair and sharp-cut lips of the heroes, more suitable for metal than marble, shows clearly that these statues were not designed in marble.[2]

[1] These fragments were once supposed to have belonged to the great Temple of the Sun built by Aurelianus about 271 A.D.; but the real site of this Temple was in the Campus Martius, probably near the Pantheon; the *Curiosum* and *Notitia* have the following entry—*Regio* vii. *Via Lata continet . . . Campum Agrippæ, Templum Solis et Castra.* Canina's supposed restoration of the Templum Solis is a remarkable example of his highly imaginative method of archæology.

[2] In front of the *Porticus Metelli*, afterwards rebuilt as the *Porticus Octavia*, in the *Campus Martius*, see p. 385, were set bronze statues of

They are usually called Castor and Pollux, but without reason. The names of Phidias and Praxiteles on the pedestals were placed there during a period of utter ignorance of the archæology of art.

A small *Calidarium*, part of the Baths of a private house, is now made into a chapel in the Church of S. Cecilia: according to tradition this is said to have been the house where the Saint lived. The clay flue-pipes all round the walls are well preserved, as are also some of the lead pipes that supplied the water. A bronze cauldron for heating water (*Ahenum*) still exists *in situ*, built into the floor over the hypocaust; the mediæval pavement is nearly 3 feet above the original floor.

Remains of other private Baths exist below the Churches of S. Pudenziana, S. Martino ai Monti, and at many other places in Rome.

The presence of a hypocaust alone does not necessarily indicate the existence of a bath, as other rooms in the time of the Empire appear to have been frequently heated in this very effectual way, but a complete wall lining of flue-tiles would only be used for the *Calidarium* or *Sudatio* of a bath.

Alexander and twenty-four horsemen, the work of Lysippus; it is possible that the groups by the Quirinal palace are copies from two of these. See Pliny, *Hist. Nat.* xxxiv. 19.

CHAPTER XII.

OTHER EXISTING REMAINS IN ROME.

In the *Forum Boarium*, near the Pons Æmilius (Ponte rotto), is one of the best preserved buildings of ancient Rome, and one of special interest from its early date.

It is popularly called the temple of *Fortuna Virilis*, which is probably a blundered form of the title *Fors Fortuna;* the mistake appears to have arisen thus; Dionysius (iv. 27) translated the phrase "*Templum Fortis Fortunæ*," *i.e.* "the temple of Fors Fortuna," into ναὸς Τύχης ἀνδρείας, as if "*Fortis*" were the adjective meaning "manly," intead of the genitive of *Fors*. The same mistake is made by Plutarch *De Fortuna Rom.* 5.

It is more probable that this is the temple of Fortuna, dedicated by Servius without any affix, for the one about which Dionysius made the above mistake was not in the *Forum Boarium*, but on the other side of the river, some distance lower down; Dionys. iv. 27; and Varro, *Lin. Lat.* vi. 17; the latter writer speaks of it as being "*extra urbem.*" See Bunsen, *Besch. Roms.* III. i. 665.

Servius also founded a temple to *Mater Matuta* in the *Forum Boarium*, which was rebuilt in 396 B.C., by the Dictator M. Furius Camillus as a thank-offering after the capture of Veii (Liv. v. 19 and 23); it is quite possible that this may be the existing temple, though perhaps dating from a later reconstruction.

What the real date of this very interesting building may be

it is impossible to guess, except that it is probably earlier than the first century B.C. Its early date is indicated by its pure Hellenic style, free from any Roman modifications (except perhaps the form of its elevated *Podium*),[1] by the absence of any marble, and by the sparing use of travertine, though much care and labour have evidently been spent on its construction and decoration. It is an Ionic *tetrastyle prostyle* temple, with seven columns on the sides, five of which are *engaged*, the other two forming the Portico; see fig. 44. It stands on a

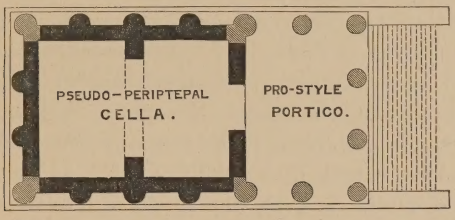

Fig. 44.
So-called Temple of Fortuna Virilis.
The black shows tufa, the shading travertine.

travertine *Podium*, about eight feet high, with well moulded plinth and cornice; the *Cella* with its engaged columns is of tufa, except the angle columns, which are of travertine, as are also the free columns of the portico. Travertine is also used for the bases of the tufa columns. This use of the harder and stronger material at points of special pressure is very common in Roman buildings, especially those of an early period.

The frieze was decorated with graceful reliefs of garlands hanging from candelabra, and ox sculls, all modelled in hard white stucco; the *cymatium* of the cornice was also enriched with foliated ornament, and had pierced lions' heads at intervals to discharge the rain-water from the roof. The whole build-

[1] The use of engaged columns along the Cella wall is not necessarily a Roman peculiarity: see page 23, note.

ing was covered externally with *opus albarium*, or hard stucco, once decorated with painting, so that originally the contrast between the white travertine and the dark brown tufa was not visible. It is now used as the Church of S. Maria Egiziaca, and the open columns of the portico are built up by a modern wall.

Another existing temple in the *Forum Boarium* is the circular building which was once thought to be the *Temple of Vesta;* see page 183. It may possibly be the *Temple of Hercules*, mentioned by Livy x. 23; who says that the *Sacellum Pudicitiæ Patriciæ* stood "*in Foro Bovario ad ædem rotundam Herculis*"; see Piale, *Tempio di Vesta*, 1817. Becker wished to identify the temple shown in fig. 44 with this shrine of Pudicitia, but it is too important a building to be called a *Sacellum*.

The temple of Hercules in the *Forum Boarium* is mentioned by Macrobius, Saturn. iii. 6; and Solinus, i. 11; and also by Festus (Ed. Muller, p. 242), who speaks of it as the *Æmiliana ædes Herculis*, possibly so-called on account of its proximity to the Æmilian bridge.

This graceful little temple appears to date from a rebuilding during the first century A.D. In design it closely resembles the real Temple of Vesta in the Forum, being a Corinthian *monopteral* building, surrounded by twenty columns, one of which is now missing, together with all the entablature, and the upper part of the *Cella* wall. The whole was built of marble except the circular *Podium*, which is of tufa, with a block of travertine used as a footing-stone under each column. The tufa was, however, completely hidden by the marble paving of the circular *peristyle*, and by a flight of eight marble steps which surrounded the whole. An open gutter for rain-water, 10 inches wide, cut in blocks of peperino, surrounded the lowest marble step in a complete ring; this was probably covered with marble cement like the similar gutter in the *Regia*.

The *Cella* is built of solid blocks of white marble in

which false joints are cut to give greater appearance of size to the building. It is surrounded with a dado about nine feet high, with a well moulded plinth and cornice. There was one central door and a window on each side; the former has a moulded architrave. The *Cella* was probably roofed with a marble *tholus* or dome covered with bronze, but this is now lost. In the Middle Ages this temple was consecrated as the Church of S. Stefano delle Carozze; so named from an ancient marble chariot which was found near it. Its dedication was afterwards changed to S. Maria del Sole from a miraculous shining picture of the Virgin which was found floating in the river hard by.

Near this circular temple remains of a large peripteral temple exist built up into the walls of the Church of S. Maria in Cosmedin. This is probably the temple of Ceres, Liber and Libera,[1] which was originally dedicated by the Consul Spurius Cassius in 494 B.C., in fulfilment of a vow made by the dictator Aulus Postumius three years before; Dionys. vi. 17 and 94.

The position of this temple is indicated by Dionysius (*loc. cit.*), Vitruvius (iii. 3, 5), Pliny (*Hist. Nat.* xxxv. 45), and Tacitus (*Ann.* ii. 46), who describe it as being by the *Circus Maximus*, and close outside the *Carceres*, in the *Forum Boarium*.

According to Vitruvius it was of the *Tuscan* or *Etruscan* style, with widely spaced (*Arœostyle*) columns, and its pediment was adorned with statues of terra-cotta and gilt bronze. Pliny (*loc. cit.*) quoting Varro, mentions this temple as the first in Rome which was adorned with works of art by Greek artists, not by Etruscans, as had up to that time been the custom. It contained mural paintings by Damophilus and Gorgasus, which, when the temple was rebuilt, were cut off the walls and fixed in wooden frames; at the same time the statues of the pediment were also taken elsewhere and dispersed.

[1] Bacchus and Proserpine were identified by the Romans with Liber and Libera.

Pliny (*Hist. Nat.* xxxv. 8) mentions another very celebrated picture in this Temple representing *Liber Pater* (Bacchus), by the Greek painter Aristides, which was carried off by Lucius Mummius with countless other spoils from Greece. It was put up to auction with other works of art by Mummius, who did not suspect its value; but when King Attalus of Pergamus bid sixteen talents for it (£4800) Mummius withdrew it from the sale and sent it to Rome in spite of the king's remonstrances.[1]

This temple, which was usually called "*Templum Cereris ad Circum Maximum*," was burnt in 31 B.C., and partly rebuilt by Augustus; the new temple was finished and dedicated by Tiberius in A.D. 17; Tac. *Ann.* ii. 49. The existing columns belong to a still later rebuilding, of which no record appears to exist. This temple was one of great splendour and importance, and was used as the *ærarium* and *tabularium* of the ædiles of the people.

Ten of the columns of the *Peristyle* are still standing *in situ;* four of them built up in the wall of the north aisle, and six in the west wall. Their capitals, which are composite in style, are well sculptured; they can be closely examined in the room over the Narthex and in the western organ-gallery. The columns are widely spaced, as, according to Vitruvius (iii. 3), was the case with the original temple.

There are also some remains of the *Cella* wall, built of large blocks of peperino, once faced with marble.

Outside the Church of S. Maria in Cosmedin, at the east end, are remains of some extensive building with walls and arches of peperino and travertine, and later additions in brick-faced concrete. These are evidently no part of the temple, and may be portions of the outbuildings belonging to the *Carceres* of the Circus Maximus.

The above mentioned buildings are all within the *Forum Boarium* and inside the limits of the Servian wall, which

[1] The magnificent collection of works of art made by King Attalus was bequeathed by him to the Roman people.

separates the *Forum Boarium* from the *Forum Olitorium*. The *Porta Flumentana*, which was near the "ponte rotto," led from one Forum into the other, and near this gate, within the enclosure of the *Forum Olitorium* stood a group of three temples set close together side by side. Remains of these still exist built into the walls of the Church of S. Niccolo in Carcere. Figure 45 shows their plan, with indications of the parts which still exist. Parts of the three are shown on a

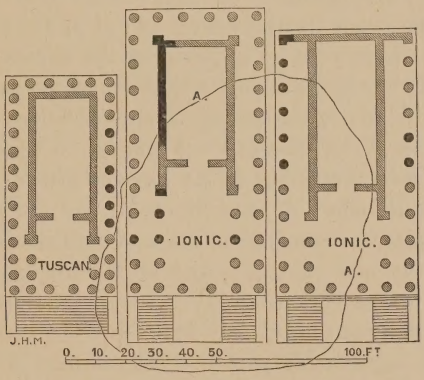

Fig. 45.

Plan of the three Temples on the site of S. Niccolo in Carcere. The part within the line A A is that shown on a fragment of the marble plan. The *black* shows what still exists.

fragment of the marble plan of Severus, as is shown by the line on the annexed figure. The central and largest temple is Ionic, *hexastyle* and *peripteral;* one side of its *Cella* wall still partly exists, built of large blocks of travertine, of which the four existing columns also are constructed.

The next in size also is Ionic, *hexastyle* and *peripteral* except at the back; seven of its columns exist; the third and smallest is Tuscan *hexastyle* and *peripteral;* five columns are still standing. The latter two temples are built partly of travertine and partly of peperino, and the whole group dates probably

from the early years of the empire. It is probable that two of these temples were dedicated to *Spes* and to *Juno Sospita*,[1] the dedication of the third is unknown.[2] It has been supposed to be the *Temple of Pietas*, but wrongly, as that was destroyed to make room for the theatre of Marcellus. The *Temple of Juno Sospita* was built in 197 B.C., by C. Cornelius Cethegus, in fulfilment of a vow made before battle; Livy, xxxii. 30.

The *Temple of Spes* was founded by M. Attilius Calatinus; Livy (xxiv. 47) speaks of it as being outside the *Porta Carmentalis*, and mentions its destruction by fire in 213 B.C. It was rebuilt the next year by a decree of the Senate; see Livy, xxv. 7. It was again rebuilt after a fire in the year A.D. 17; Tac. *Ann.* ii. 49; in this passage Tacitus mentions a *Temple of Janus* in the *Forum Olitorium*, but temples to this deity were usually of a form different to the three of which remains still exist in S. Niccolo. A considerable part of the porticoes of these temples was standing in the sixteenth century, projecting into the modern street, and are shown in one of the drawings in Du Perac's *Vestigj di Roma*. See also Labacco, *Architettura*, 1557; *Ann. Inst.* 1850, p. 347; and *Mon. Inst.* v. 24. A considerable part of the travertine paving of the *Forum Olitorium* has recently been discovered near this group of temples; see *Bull. Comm. Arch. Rom.* 1875, p. 165 *seq.*

The Porticus Octaviæ and the temples it enclosed was one of the most magnificent groups of buildings in the *Regio* which took its name from the *Circus Flaminius*. It stood near the

[1] An early Latin or Etruscan form of Juno, worshipped specially at Lanuvium, where a large temple and grove were dedicated to her; in the latter was preserved a sacred snake. Juno Sospita is represented as a warlike goddess, armed with spear and shield, and wearing a goat's skin over her head. In the British Museum an early Græco-Etruscan Amphora has a representation of a contest between Hercules and Juno Sospita. A very noble statue of her is preserved in the round hall of the Vatican.

[2] Burn, in his valuable work, *Rome and the Campagna* (p. 306, note i.), suggests that the third temple may have been that to *Apollo Medicus*, mentioned by Livy (xl. 51), as being "*post Spei ad Tiberim.*"

Theatre of Marcellus, and its site is now partly occupied by some of the most squalid streets of the Ghetto, which are soon to be pulled down: important discoveries will probably be made when this is done. Even now existing remains, partly hidden by modern buildings, with the help of a fragment of the marble plan, enable the arrangement of the whole group to be fairly well made out. The *Porticus Octaviæ* was built by Augustus on the site of the *Porticus Metelli*, founded in 146 B.C. by the Pro-prætor Q. Metellus Macedonicus; it must not be confounded with the neighbouring *Porticus Octavia*, built by Cn. Octavius, the conqueror of King Perseus in 168 B.C., Livy, xlv. 6 and 42, and rebuilt by Augustus under the same name, as is recorded in the Ancyræan inscription—PORTICVM · AD · CIRCVM · FLAMINIVM · QVAM · SVM · APPELLARI · PASSVS · EX · NOMINE · EIVS · QVI · PRIOREM · EODEM · IN · SOLO · FECERAT · OCTAVIAM. This latter building was close to the Theatre of Pompey, but no remains of it are known to exist.

The full name of the other group of buildings was the *Porticus Liviæ et Octaviæ*, as it was dedicated by Augustus in the joint names of his wife and sister; Suet. *Aug.* 29; Ovid, *Art.* i. 69, and iii. 391.

It consisted of a very large quadrangle with an open colonnade all round it and a central porch with pedimental roof. Within this enclosure stood two temples, dedicated to *Jupiter Stator* and *Juno Regina*, both of which were founded in the 2d century B.C. but were probably completely rebuilt by Augustus. The *Temple of Juno* was first built by M. Æmilius Lepidus in 179 B.C. as a thank-offering for his victories over the Ligurians, and the *Temple of Jupiter Stator* was consecrated at the same time; see Livy, xxxix. 2, and xl. 52.

According to Pliny the statues of Juno and Jupiter were each carried by mistake into the wrong temple, and were allowed to remain there because it thus appeared that each deity had thus chosen a special resting-place.

On this account, he says, the paintings and ornaments appropriate to Juno were in the *Temple of Jupiter;* see Pliny, *Hist. Nat.* xxxvi. 4. In the same passage Pliny says that the architects of the two temples, when they were rebuilt by Augustus, were two Laconian Greeks called Sauras and Batrachos, whose names mean "lizard" and "frog," and that when they were forbidden to inscribe their names upon the temples they introduced lizards and frogs among the ornaments of the bases (*spiræ*).

Reliefs of these reptiles are introduced in the volutes of the capital of a fine ancient column which now exists in the nave of S. Lorenzo fuori le mura. It is very probable that these are the columns mentioned by Pliny, in spite of the reptiles being among the ornaments of the capital instead of the base. There is no place in the base of a column where such reliefs could well be introduced, and it is probable either that the word *spiris* is a corrupt reading, or that Pliny was mistaken in this detail. Winckelmann is certainly right (*Œuvres*, ii. p. 589) in attributing this well sculptured column to the Augustan age.

Several other handsome buildings adjoined the *Porticus Octaviæ*, and appear to have been arranged outside the great quadrangle; these were a hall for meetings of the Senate and other public bodies, two libraries, and a set of notaries' offices, called respectively the *Curia*, *Bibliotheca*, and *Schola Octaviæ;* see Plutarch, *Marc.* 30; Dion Cass. xlix. 43; lxvi. 24; and Pliny, *Hist. Nat.* xxxvi. 4, and xxxv. 37.

The whole group, including these buildings and the *Porticus*, was known as the *Opera Octaviæ;* see Pliny, *Hist. Nat.* xxxvi. 4. In this section Pliny mentions a number of fine works of art by distinguished Greek sculptors which adorned various parts of this magnificent group of buildings. Statues of Æsculapius and Diana, by Cephisodotus the son of Praxiteles, stood in the Temple of Juno; the statues of Juno and Jupiter in their respective temples were by Dionysius and Polycles.

In the Temple of Juno was also a statue of Venus by Philiscus, and several statues by Praxiteles. In the Temple of Jupiter was a group of the struggle between Pan and Olympus, the work of Heliodorus, a Venus at the bath by Dædalus, and another statue of Venus by Polycharmus. Pliny also says that in the *Schola* was the much admired Thespian Cupid by Praxiteles; (see also Cicero, *In Verrem*, II. iv. 4 and 135).

In some part of the Porticus was a statue of Aphrodite by Phidias, which Pliny says was of extraordinary beauty. In the *Curia* was a statue of Cupid holding a thunderbolt, but by what sculptor had been forgotten; Pliny mentions this as one of the instances of Roman indifference in artistic matters.

In the *Schola* were also fine paintings of Hesione and Philip of Macedon, Alexander the Great and Minerva, the work of Antiphilus (*Hist. Nat.* xxxv. 37); and many fine statues by unknown sculptors, namely, four satyrs, one bearing on his shoulders *Liber Pater* (Bacchus), veiled with a *palla*, another carrying Libera (Proserpine), a third bearing a weeping child, a fourth giving another figure drink out of a *crater*. There were also two statues of *Aurœ*, female figures representing the winds, veiling themselves with their robes; *Hist. Nat.* xxxvi. 4.

In front of the original *Porticus Metelli* had been placed bronze statues of Alexander the Great, and twenty-four of his friends, represented as horsemen, the work of Lysippus, made in commemoration of the death of many of Alexander's officers at the battle of Granicus. These were brought to Rome by Metellus in 146 B.C., from their original position at Dium, and were afterwards set in the *Porticus Octaviæ*. Pliny, *Hist. Nat.* xxxiv. 19; Vell. Pat. i. 11, 3; Arrian, *Anab.* I. xvi. 4.

Other works of art among these richly decorated buildings are mentioned by various authors.

The *Curia Octaviæ* was frequently used for meetings of the Senate, as, for example, when they assembled to do honour

to Vespasian and Titus after the taking of Jerusalem; see Dindorf on Josephus, *Bell. Jud.* vii. 5.

In the reign of Vespasian the whole group of buildings was destroyed by fire (Dion Cass. lxvi. 24), and not rebuilt till the time of Severus in 203 A.D., as is recorded in the existing inscription over the porch, which led into the enclosure or porticus. This porch, which is still fairly well preserved, stands close by the former fishmarket of the Ghetto. It is built of brick-faced concrete, once lined with thin slabs of marble, and has Corinthian columns, pediments, and entablatures of solid marble.[1] In its original form it was like the front of a hexastyle temple, repeated twice with a roofed space between; but in the fourth or fifth century some of the Corinthian columns were replaced by a brick and concrete arch, probably after damage done by an earthquake.

Other columns of the porticus exist, built into various houses, and into the walls of the Church of S. Michele.

Some portions also exist of the temples of Jupiter and Juno, which stood in the centre of the enclosure.

Contigliozzi, in his *Portici di Ottavia*, 1861, and the *Ann. Inst.* 1868, p. 108, give the results of excavations which have determined the extent of the whole porticus. The south-west side of the enclosure ran along the line of the Via della Catena di Pescheria, and had at each angle a four-way entrance, like the existing arch of *Janus Quadrifons* in the *Velabrum*. The north-west side crossed the Church of S. Ambrogio, and passed along the line of the Palazzo Righetti to a point near S. Caterina de' Funari, where the north-east side began, and reached to the Palazzo Capizucchi. The south-east side runs past the monastery of the Madre di Dio. Remains of the *Temple of Juno* exist in No. 11, Via di S.

[1] Some of the pedimental sculpture existed in the last century, and is shown by Piranesi in his etching of this Porticus. In the centre is a winged figure, apparently a Victory, with another female figure on each side, with rays of light round their heads.

Angelo, consisting of three marble columns with composite capitals, which formed the western angle of the temple.

In the church of S. Maria in Portico[1] are built up some remains of the *Temple of Jupiter Stator*, and the space between the two temples is marked by the width of the Via della Tribuna. Near the middle of this street remains were discovered of the *Schola Octaviæ*, which stood at the back of the temples; behind the *Schola* were the libraries, one for Latin and the other for Greek books, with the *Curia Octaviæ* between them.

The fragment of the marble plan which shows the *Porticus Octaviæ*, shows also on its north-west side the enclosure round the Temple of *Hercules Musarum* (the Greek *Heracles Musagetes*), separated from the Porticus only by a street. This temple was built by M. Fulvius Nobilior, the friend of the poet Ennius, probably out of the rich spoils taken by him from the Ætolians in 187 B.C.; Livy (xxxix. 5) gives a list of the immense treasures which formed this spoil. In this temple were placed statues of Hercules playing the lyre, surrounded by the nine muses, hence the epithet, *Musagetes*; these statues were modelled in terra-cotta (*figlina opera*) by the celebrated painter Zeuxis; see Pliny, *Hist. Nat.* xxxv. 36, § 66.

The above mentioned fragment of the marble plan which is inscribed AEDIS · HERCVLIS · MVSAR(VM) does not show the temple itself, but only a part of its surrounding *Porticus* or quadrangular colonnade, which was added by L. Marcius Philippus, the stepfather of Augustus, who also rebuilt the temple itself; Suet. *Aug.* 29; Martial, v. 49, 12; and Ovid, *Fast.* vi. 799. Pliny (*Hist. Nat.* xxxv. 37) calls this enclosure the *Porticus Philippi*, and says that in it stood three statues by the Greek sculptor Antiphilus—Liber Pater, Alexander the Great as a boy, and the death of Hippolytus when his horses were frightened by the bull sent by Poseidon.

[1] So called from its position within the *Porticus Octaviæ*.

No remains of these buildings are now visible, but parts will probably be discovered during the approaching demolition of the old street to the north-west of the *Porticus Octaviæ*.

The so-called *Temple of Neptune* is built into the walls of the former *Dogana di Terra* in the Piazza di pietra. Its real name is doubtful. The *Porticus Neptuni* or *Posidonium* was built by Agrippa to commemorate his naval victories; on its walls were paintings of the adventures of Jason and the Argonauts, whence it was also called the *Porticus Argonautarum;* Dion Cass. liii. 27, and lxvi. 24; Martial iii. 20, and Spartian, *Hadr.* 19.

It stood not far from the Pantheon, and the existing remains in the Dogana agree very well with its probable site. The parts still existing are eleven fine Corinthian columns of Luna marble with their entablature, a long piece of the side wall of the *Cella*, and a short bit of one of the end walls; these are built of long blocks of peperino, once cased with marble.

The ceiling of the *peristyle*, instead of having the usual marble slabs with moulded coffers (*lacunaria*), is formed by a concrete barrel vault, once decorated with painted stucco reliefs. This, and the second-rate style of the Corinthian capitals and enriched cornice with its *pulvinated* or swelling frieze, show that the building is considerably later than the time of Augustus, which, however, is not conclusive against its being the *Temple of Neptune*, for that was injured in the fire of A.D. 80, and may have been mostly rebuilt.

The existing piece of the *Cella* wall has recently been exposed to view by the removal of the modern wall which blocked up the eleven columns; and in 1878 excavations made under the surrounding houses exposed remains of an extensive *peribolus*, forming a court or Porticus nearly 330 feet square, in the centre of which the temple stood, raised on a podium. The existing parts of the temple and the line of the outer Porticus are shown on fig 46.

The outer wall of the *peribolus* was of peperino, probably marble lined, and within were rows of columns forming a covered walk all round like a cathedral cloister; see *Bull. Comm. Arch. Mun. Rom.* vi. Tav. iv.

Another supposition about this building is, that it was the *Temple of Hadrian*, mentioned in the *Mirabilia Romæ* as being near this site. Urlichs, *Codex topogr.* p. 107.

Near these remains in the Dogana is a slight elevation

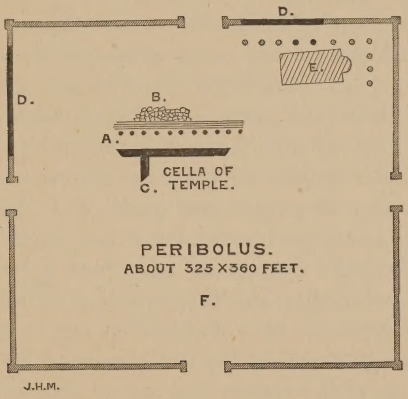

Fig. 46.

Remains of the so-called "Temple of Neptune," showing the probable extent of the recently-discovered *porticus* round it.

A. Existing Corinthian columns.
B. Part of the paving of the peribolus.
C. End wall of the Cella.
D. Existing part of the porticus, buried under the modern houses.
E. Church of S. Stefano.
F. Piazza di S. Ignazio.

called Monte Citorio, on which stands the modern Parliament house.

It is very probable that this mound is formed by remains of the once large and magnificent temple of Marcus Aurelius, whose sculptured column stands near. Parts of a very massive

travertine wall and arcade are visible in the walls of several modern palaces by and on Monte Citorio.

The existing column of M. Aurelius stood in front of the temple, and the whole was surrounded by an extensive *peribolus* forming a sort of Forum not unlike that of Trajan, though on a less magnificent scale; see *Ann. Inst.* 1852, p. 338, and *Mon. Inst.* v. Tav. 40.

No remains now exist of the immense hall called the *Diribitorium*, which was built by Agrippa as a place for scrutiny of the votes given by the *Comitia* in the adjacent *Septa Julia*. It was remarkable for the enormous span of its wooden roof, which Pliny (*Hist. Nat.* xxxvi. 24) mentions as one of the wonders of Rome, and which, according to Dion Cassius (lv. 8), exceeded that of any other roof in the world. It was used under the later empire for theatrical shows; Suet. *Cal.* 18; and in the reign of Severus was pulled down on account of the roof having become unsafe; Dion Cass. *loc. cit.*

The Septa Julia appears to have been a large covered *Porticus* or rectangular building supported by rows of piers, forming seven parallel lines of aisles. It was begun by Julius Cæsar (Cicero, *Ad Att.* iv. 16) and completed by Agrippa in the same year as the consecration of the Pantheon, 27 B.C.; Dion Cass. liii. 23.

This building was intended as a voting place for the *Comitia Centuriata*, who before that had met in an open space in the *Campus Martius* divided into compartments, one for each *century*, by stakes and ropes stretched across them.

The *Septa Julia*, so called in honour of its founder, was a very large and magnificent building decorated with marble linings and rows of statues, among which Pliny (*Hist. Nat.* xxxvi. 4) mentions statues of Olympus, Pan, and Chiron with his pupil Achilles, the authorship of which in his time had been forgotten. The *Septa Julia* contained *Rostra* for orations, and was sometimes used for gladiatorial fights; see Dion Cass. lvi. 1, and lv. 8; and Suet. *Aug.* 43. In later times the *Septa*

appears to have become a great bazaar or exchange; see Martial, ii. 14–5, and x. 80, 4.

Fragments of the marble plan represent this building as it was in the time of Severus; the plan is inscribed SAEPT*a* *Ju*LIA, and agrees with the existing remains under the Church of S. Maria in Via Lata, the Palazzo Doria and adjacent buildings.

Eight rows of travertine piers, 3 feet 4 inches square, are still visible; five rows under the church, each consisting of five piers, and three rows under the Doria palace, each with eight or nine piers. The travertine appears to have been covered with painted stucco or marble casing.

The position of the *Septa Julia* was on the verge of the Campus Martius, along the side of the *Via Lata*, just before it ran into its continuation—the *Via Flaminia* (modern Corso).

The Temple of Minerva (*Chalcidica*) stood on the site of the Dominican Church of S. Maria sopra Minerva, as the name records. It was founded by Pompey the Great, about 60 B.C., according to Pliny, *Hist. Nat.* xxvi. 7; and its dedication is recorded in an inscription now lost, which was copied by Marliano, and is quoted by Nardini, *Roma Antica*, Ed. Nibby, 1820, iii. 130. It is, however, possible that it was another temple to Minerva, which Pompey built out of his oriental spoils, as Dion Cassius attributes the founding of the "*Temple of Minerva, which was called Chalcidicum,*" to Augustus. Dion Cassius (lxvi. 24) records that the *Temple of Minerva Chalcidica* was restored by Domitian after the very destructive fire in A.D. 80., together with the adjoining *Iscæum* and *Serapæum*. Fulvio and Marliano describe extensive remains of the temple as existing in the sixteenth century, adjoining the Dominican Church.

In the latter part of the second century, A.D., the worship of Egyptian deities became very popular in Rome, especially under Commodus, Caracalla, and Severus Alexander; temples to Isis and Serapis were built close by the Temple of Minerva,

and appear to have been decorated with statues and obelisks imported from Egypt. A large number of Egyptian pieces of sculpture have been at different times found under and near the Church of S. Stefano del Cacco, among them three small obelisks, one of which stands in the Piazza of the Pantheon, another in the Piazza of S. Maria sopra Minerva, and a third, discovered in 1882, now lies in the Piazza del Collegio Romano, together with a very curious gray granite column, round which are sculptured reliefs of Egyptian deities, resembling in style sculpture of the Ptolemaic period. See *Le Scoperte dell' Iseo Campense* in *Bull. Comm. Arch. Rom.* for 1883; *Ann. Inst.* for 1853; and Fea, *Miscell.* ccliv. 112. On this site were found the two Egyptian lions in granite, which have recently been moved into the Capitoline Museum from their former site at the foot of the great flight of steps leading up to the Capitol; their places are now occupied by modern copies. The statue of Isis, in the "hall of the dying gladiator," in the Capitol, and the colossal figure of the Nile surrounded by boys (see page 261), in the Vatican, were also found here; the statue of Minerva which is near that of the Nile, according to one account was found on the site of the Temple of Minerva.

Juvenal (*Sat.* vi. 529) speaks of the Temple of Isis as being near the *Septa Julia*, which he calls the *Ovile*, or sheepfold, from its pen-like divisions for the voters.

The three temples to *Minerva Chalcidica*, *Isis*, and *Serapis*, are catalogued in the *Curiosum* under *Regio* ix.; see Urlichs, *Codex topogr.* p. 14. Part of the *Serapæum* or *Temple of Serapis* is shown on one of the fragments of the marble plan; see Jordan, *Forma urbis Romæ*.

The temple of *Venus and Rome*, by far the largest of all the temples in Rome, was designed by the Emperor Hadrian, and criticised by the distinguished Greek architect and engineer Apollodorus of Damascus; Spartian, *Hadr.* 19, and Dion Cass. lxix. 4; see page 308.

Apollodorus remarked that it should be raised on a high *Stylobate*, so as to command the *Sacra Via*, and that the space under it should be utilised to contain scenery and machinery for use in the neighbouring amphitheatre, that is, the Colosseum. It appears from the existing remains that Hadrian adopted these suggestions, and there is probably no truth in Dion Cassius's statement that Apollodorus was put to death by Hadrian in revenge for his criticism, an act which would have been quite at variance with what is known about Hadrian's character.

This temple which consists of two *Cellæ* set back to back was dedicated to *Venus Felix* and *Roma Æterna;* it was left unfinished by Hadrian, and completed by Antoninus Pius. In the reign of Maxentius it was much injured by fire, and its restoration was begun by him, and carried out by Constantine; Amm. Marcell. xvi. 10. It was a *decastyle pseudo-dipteral* building, having, that is, ten columns at each end, and those at the side set at a considerable distance from the *Cella* wall; see fig. 47. These columns were of white Athenian marble of the Corinthian order. Being dedicated to two deities the *Cella* was made double, thus forming two nearly square halls with large apses at one end. Externally the double character of the temple did not appear, as the two *Cellæ* were treated as one, being surrounded with one continuous *peristyle*.

In the apses were colossal statues of Venus and Rome, the pedestals for which still partly exist.[1]

The side walls of the *Cellæ* were surrounded with rows of porphyry columns, set between niches containing statues. The vaults of the *Cellæ* were of barrel or semi-circular form, enriched with deeply sunk coffers decorated with stucco mouldings and rosettes, all richly gilt and painted. The vaults over the two apses are still well preserved, and

[1] Silver statues to Marcus Aurelius and his wife Faustina were placed here by the senate, and in front of them an altar, at which sacrifice was offered by newly married people; Dion Cass. lxxi. 31.

retain some of their rich ornaments modelled in *cæmentum marmoreum.*

The walls are of brick-faced concrete, once wholly lined

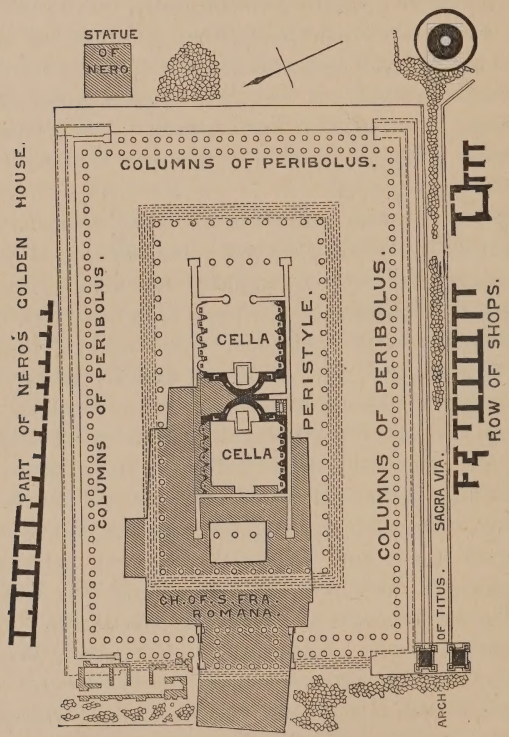

Fig. 47.

Plan of the Temple of Venus and Rome.

with slabs of marble; restorations after the fire in the reign of Maxentius can be traced among the existing walls of the *Cellæ;* in which brick-stamps exist both of the time of Hadrian and of Maxentius and Constantine.

The pediment was decorated with sculpture, as is shown

on several first brasses of Hadrian, with the legend ROMÆ ÆTERNÆ or VENERI FELICI. See fig. 48.

A fragment of a bas-relief shows the sculpture in the tympanum of one of the pediments representing Mars and Rhea Sylvia, the wolf and the twins with Faustulus standing by, and other figures.

The roof of the temple was covered with bronze tiles plated with gold, which remained in their place till they were stripped off by Pope Honorius I. (625-40) and used to cover the Basilica of S. Peter; see Anastasius Biblio., *Vita Honor.* I. Ed. Bianchini, 1718. These tiles were stolen by the Saracens during their invasion of the Leonine City in 846 A.D.

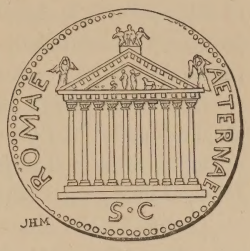

Fig. 48.
Temple of Venus and Rome, as shown on the reverse of a First Brass of Hadrian.

The floor of the temple was in rich *opus sectile* mosaic of coloured marbles and red and green porphyry; many loose fragments of this have been found.

This enormous temple stood in an outer *Peribolus* or *Porticus* with a colonnade of about 180 gigantic columns in red and gray Egyptian granite and red porphyry, forming a vast sort of cloister enclosing rows of statues; a few pieces of granite columns still remain scattered about the *peribolus*.

The temple and its whole *peribolus* stood on an immense platform, formed at the end towards the Forum by cutting away the tufa rock of a ridge which once connected the Palatine and the Esquiline Hills, probably the ancient Velia; see p. 134.[1]

At the other end the platform extends beyond the slope

[1] Hadrian also completed a temple of more than equal size and magnificence at Athens—that dedicated to Olympian Zeus, which had been founded but not carried out many centuries before. Some of the columns of its *dipteral peristyle* are still standing.

of the hill into the valley of the Colosseum, and here its level is raised by an enormous bulk of concrete poured in a fluid mass and set as hard as a rock. The concrete which came under the walls or columns of the temple is made of broken bits of lava, while the main mass is of the softer tufa concrete, used because it had little weight to bear.

The probable use of the chambers formed in the concrete of the platform is mentioned at p. 308. These are chambers purposely constructed, and not merely voids left by the removal of blocks of stone, as has been asserted.

Similar chambers appear to have been constructed under all the temples of Rome which were set on lofty *podia*, as, for example, in the Temples of Concord, Saturn, Castor, and Divus Julius; see Chap. V.

Owing to the almost complete disappearance of this once immense *peribolus* colonnade, it is very difficult now to realise the stupendous effect of grandeur which must have been produced by this stately *porticus* and the temple within its area. It extended, as is shown on fig. 47, along the whole rise of the *Sacra Via*, and reached across to the edge of the Esquiline Hill, where it was bordered by some remains of Nero's *Golden House* which had escaped the demolition of Vespasian and Titus. Near the Church of S. Francesca Romana some marble steps still exist, which mark its limit at the end which faced towards the *Forum Magnum*.

At the other end where the platform rises high above the level of the valley, access was given by a flight of steps winding up at each angle; the concrete core of these stairs alone remains.

The extreme scantiness of even fragments of marble and granite, of which this temple once possessed so enormous a quantity, is accounted for by the fact that for centuries its ruins were used as a quarry; and finally, during the most architecturally degraded period of the history of Rome, the ninth to the twelfth centuries, all that remained of its marble

columns, cornices, and other decorations, were burnt into lime in a number of kilns which were constructed in the area of the building out of the fireproof porphyry columns with which the interior of the two *Cellæ* were decorated.

The identification of these remains with the *Temple of Venus and Rome* admits of no doubt; its brick-work contains stamps dated 123 and 134 in the reign of Hadrian. Spartianus describes it as standing on the former site of the Colossus of Nero, and Apollodorus's criticism shows that it was near the *Sacra Via* and the Colosseum. Moreover, no other double temple of anything approaching the size of this one existed in Rome.[1]

That part of the Cælian Hill which immediately faces upon the Colosseum is covered with very extensive remains of a building partly constructed of massive blocks of travertine and partly of brick-faced concrete. Of the latter is built the enormous *peribolus* wall which surrounded the whole of this spur of the hill; a great part of it is still very well preserved, though stripped of its marble columns and linings. Its brick-work is of the Flavian period; the external face of this massive and lofty wall is decorated with a series of tall apsidal recesses and niches, apparently meant to contain colossal statues. Remains of mosaic pavements show that this great building once extended over and beyond the new road, which now leads from the Colosseum to S. Stefano Rotondo.

Under the Campanile and Passionist Monastery of S.S. Giovanni e Paolo, within this great *peribolus*, there still exists

[1] It need hardly be said that Mr. Parker's theory, set forth in *Archæologia* and elsewhere, as to this being the *Porticus Liviæ* is quite without foundation. An existing fragment of the marble plan shows that the *Porticus Liviæ* had no resemblance to these remains; moreover, the *Porticus Liviæ* is recorded to have been in the third *Regio*, while this building is in the fourth, the one in which the Temple of Venus and Rome is catalogued; see *Notitia*, Urlichs, *Codex topog.* pp. 5–7.

part of a massive travertine arcade, with engaged columns very like that of the Colosseum, and equally coarse in detail.[1] A long length of this arcade existed in the sixteenth century, and is shown in several drawings of that period, but the greater part has been removed for building material. What this extensive building was remains at present doubtful, and will be so till further excavations are made; according to one theory it is the *Temple of Claudius*, built by Vespasian; Suet. *Vesp.* 9; but Bunsen's suggestion (*Beschr.* iii. p. 476) is much more probable, namely, that it was the house of Vectilius (*Domus Vectiliana*), bought and probably enlarged by Commodus, Hist. Aug. *Comm.* 16, and connected with the Colosseum by a subterranean passage or *Crypto-porticus*. Such a passage actually exists and has been partially cleared out (see page 326). It was in this passage that the unsuccessful attempt to stab Commodus was made, and he was murdered shortly after in the *Domus Vectiliana*. He is said to have taken up his abode in this house because he could get no sleep on the Palatine; and also, partly, in order to be near the amphitheatre and its scenes of butchery, in which he took such keen delight.

Nero's continuation of the Claudian aqueduct passes close by this building, and a branch aqueduct diverges as if to supply it and the Colosseum below with water.

A large number of chambers and extensive passages exist under the great *peribolus*, excavated in the rock; these are merely cavities left by quarrying the tufa, and there is no foundation for the popular notion that they were *vivaria*, dens for beasts ready for use in the Colosseum. As was so often the case with old quarries, some of these chambers appear to have been used in later time as cisterns for storing water.[2]

"*Temple of Minerva Medica*" on the Esquiline, near the

[1] The garden of this monastery occupies most of the space enclosed by the *peribolus* wall.

[2] Compare the rock-cut cisterns under the *Temple of Jupiter Victor* (so-called) on the Palatine; see page 88.

Porta S. Lorenzo. This title is a misnomer, which originated in the supposed discovery of a statue of Minerva, which is now in the Vatican, among the ruins of the building. It appears, however, that this statue really was found by the Temple of Minerva Chalcidica (S. Maria sopra Minerva); see page 391. The building appears to be a *Nymphæum*, or a part of some baths of about the time of Gallienus, 263–8. In the Middle Ages it was known as the *Terme di Gallucio*, a name for which it is difficult to account. It is a very curiously planned building, having a central decagonal hall, vaulted with a dome, and once surrounded with a number of rooms radiating from it. It was once richly decorated with marble and porphyry, and contained a large quantity of statues, many of which have been disinterred at different times, among them statues of Hercules, Adonis, Venus, Pomona, Æsculapius, and others. A temple to *Minerva Medica* is catalogued in the *Notitia*, *Regio* v.

Somewhat similar ruins, by the neighbouring Basilica of S. Croce in Gerusalemme, have been supposed to belong to part of a *Nymphæum* of Severus Alexander, 222–235, also mentioned in the *Notitia*, under *Regio* v., but a more probable suggestion is that of Becker (*Handbuch*, pp. 547–8), who thinks that they are part of the *Sessorium*, a Court of Justice, which is mentioned by the Scholiast on Horace (*Schol. Cruq. ad. Hor. Epod.* v. 100), and by other late writers.

The Prætorian Guard, who afterwards became so powerful and unscrupulous in the making and dethroning of the emperors of Rome,[1] were first established in a permanent camp by Tiberius, just outside the limits of the city, as they existed at that time; Suet. *Tib.* 37. A considerable part of Tiberius's enclosure wall still exists.

Within these walls the empire was put up to auction by the Prætorians, after the murder of Pertinax in 193 A.D., and

[1] In 6 A.D., when the *Ærarium Militare* was instituted, there were nine cohorts of Prætorians, including about 10,000 men; the rest of the army contained then twenty-five legions, composed of Roman citizens.

knocked down to Didius Julianus at the price of about £312 to each member of the Guard; Herodian. ii. 6, and Spartian. *Julian.* i.; see also Tac. *Ann.* IV. i., and *Hist.* i. 40 and ii. 94. The Prætorians were finally disbanded by Constantine, who demolished the inner wall of the camp on the side towards the city. The other walls were spared, because they had been included by Aurelianus in his great circuit wall all round Rome, and so formed part of the defences of the city. In this way the camp forms a large projection at the north-east angle of the city, about 500 yards long; see plans of Rome.

When the wall of Aurelian was built (c. 270 A.D.), the camp walls were more than doubled in height, the upper part of the gate towers demolished, and the entrances blocked up; but it is still possible to trace a long piece of the original wall of Tiberius's time, and the positions of the *Porta Decumana* and the *Porta Principalis dextra*. The plan of the camp and the arrangement of its gates was like that of any other Roman camp in an enemy's country.

The enclosure wall is about 14 feet high, built of massive concrete, with a very neat facing of brick-work, easily to be distinguished from the additions and rebuilding of Aurelian's time and later. It had small square battlements, about 2 feet 6 inches wide, with moulded capping, at rare intervals, about 20 feet being left between them. A little way below is a simple string course of moulded bricks.

The central gate on the north side is the best preserved. Its opening is decorated with tall brick pilasters, with moulded terra-cotta bases, and on each side are two small windows, 10 inches wide, with arched heads formed in one slab of terra-cotta; other slabs, with moulded edges built in, form the label mould. The brick facing of the pilasters is especially neat and close jointed, with bricks $1\frac{1}{4}$ inch thick, and joints barely $\frac{1}{8}$ inch, of fine, hard, red clay; in other places the joints are thicker, but the whole surface is very neat and regular, and was not covered with stucco.

This wall of Tiberius's time can be traced all along the north side, and along a great part of the east side. Built against the inside of the wall is a row of small vaulted chambers, probably rooms for some of the guard.

When the Camp was included in the line of the Aurelian wall, its walls were raised to more than double their original height all along the three sides which project beyond the main line of the city. This upper and later wall is of several different dates, partly of Aurelian's time and partly of the time of Honorius, with many later restorations and clumsy patchings.

The Basilica of Constantine was begun by Maxentius, but

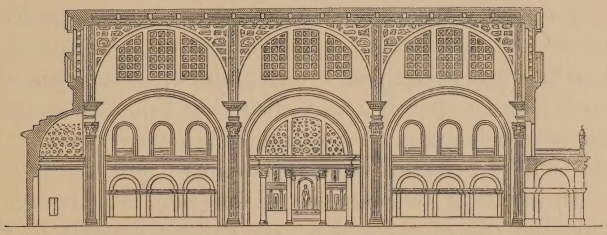

Fig. 49.
Section of the Basilica of Constantine or Maxentius.

left unfinished at his death in 312, and completed by Constantine; Aur. Victor, *Cæs.* 40, 26.

In the *Notitia*, *Regio* iv., it is catalogued as the *Basilica Constantiniana*, and comes in order between the *Sacra Via* and the *Templum Faustinæ;* in the *Curiosum* it is called the *Basilica Nova* (Urlich, *Cod. top.*, pp. 6 and 7), being probably quite new when the catalogue was made.

Little of this once magnificent building exists except the three vaulted chambers, 68 feet in span, which opened out of the great central hall on the north-east side (see fig. 49). The central one of these has an apsidal end, containing the pedestal for a colossal statue, and four niches for other statues on each side.

The floors of these niches are formed by a massive marble shelf like a cornice, partly supported by marble corbels between the niches, each rudely carved with figures of Victory and coarse foliage.

A marble seat and steps run all round the apse, which appears to have been a sort of tribunal, and was separated from the rest of the hall by two columns and bronze screens (*cancelli*), the marks of which still exist on the large marble slabs of the pavement.

The other halls at the sides of this have no apses; all three are covered with magnificent barrel vaults in concrete, decorated with sunk coffers and enriched stucco mouldings.

The great central hall must have been a most magnificent chamber. It was more than 80 feet wide, and was vaulted in three bays with *quadripartite* groining, also decorated with sunk panels like the vault over Caracalla's great hall. The proportion and whole design of Constantine's hall are very similar to that built by Caracalla, which is shown on p. 361.

Three bits of the springing of this vault alone remain in place, and one of these is a very striking example of the strength of the Roman concrete, and the fact that these great vaults were cast in one mass and were not built as arches with lateral thrust.

This piece of the springing of the vault was originally designed to rest on a great Corinthian column, from which it appeared to spring, as the vault does in fig. 42; the column, however, has been removed, and yet this great piece of vaulting still stands though it has no support under it, and is merely kept up by its adherence at the back to the wall behind. A fine fragment of fallen vault now lies on the floor below.

The column, which was removed by Paul V. at the beginning of the seventeenth century, now stands in the piazza opposite the main entrance to S. Maria Maggiore: all the rest have perished or exist unrecognised in some church of Rome. The

end of the Basilica towards the Colosseum is occupied by a long hall forming an antechamber; this is possibly what Vitruvius calls the *Chalcidicum*,[1] a hall which he says may be added if there is room for it at the end of a Basilica; *Arch.* v. 1; in this chapter Vitruvius gives many interesting details on the arrangement of *Fora* and *Basilicæ*.

The back of the existing part of the building was decorated with two orders of engaged columns, and arches supporting marble entablatures, which are shown in several sixteenth-century drawings, especially in the great oil painting of Rome in the museum at Mantua, published by De Rossi, *Piante di Roma anteriori al sec.* xvi. 1879, folding plate.

The front towards the *Sacra Via* was probably even more magnificent, having red porphyry columns set off by their background of white marble, and a long flight of marble steps leading up from the road to the level of the main floor of the Basilica. The existing fragments of porphyry columns probably belonged to this front, but are not now in their right position.

The whole interior of the building was richly decorated with various marbles, granites, and porphyries, except the vault which was covered with moulded stucco once painted and gilt.

The external cornice at the top of the building on the Colosseum end is not of solid marble, but is formed by marble consoles which support courses of large tiles; these tiles were covered with hard stucco worked in mouldings with enriched members, and then decorated by painting: this method of forming cornices, which were too high to be examined closely, was a very common one in Rome; examples exist round the exterior of the Pantheon, at the *Thermæ* of Diocletian, and also on the front of the *Curia* (now the Church of S. Adriano) which Diocletian rebuilt. It is possible that the Pantheon

[1] Said to have been so called from its being an invention of an architect of Chalcidice.

cornice is not of Agrippa's time, but dates from the restoration of Severus in A.D. 202.

Examples of private houses, in a good state of preservation, are comparatively rare, but the recent laying out of new quarters on the Esquiline, Viminal, and Quirinal Hills, and the formation of the river embankment, has brought to light a large number of houses, both the *domus* of the rich, and the crowded *insulæ* or blocks, which contained one or more families on each flat, as is the modern custom in Rome and other Italian cities.[1]

Unhappily, in most cases the discovery of these most interesting remains has been immediately followed by their destruction, so that the transference of the capital of Italy has had, from an archæological point of view, the most disastrous effects. A large number of interesting plans of Roman houses, though of unknown ownership, are shown on various fragments of the marble plan.

The most complete house in Rome, and a very good typical example of a rich man's dwelling, is that on the Palatine, known as the *House of Livia or Germanicus;* its plan is given in fig. 13, page 100.

Another fine private house, supposed to be the Villa of Mæcenas, was discovered in 1874, on the line of the Servian wall and Agger, not far from S. Maria Maggiore. It is built of concrete faced with fine *opus reticulatum* unmixed with any brick-work, and probably dates from the time of Augustus. In construction it closely resembles the Palatine house. One room only has been preserved; this is a rectangular hall with apsidal end; all round the walls are tiers of high steps looking something like seats, and on account of these the hall

[1] The remarks of Vitruvius (vi. 3) refer to the isolated house or *domus;* the absence of originality in Roman domestic as in religious architecture is shown by the fact that nearly all the names for the different parts of the house are Greek, *e.g.*, *Triclinium*, *Æcus*, *Peristylium*, *Exedra*, *Hypæthrum*, etc.

has been called the *Auditorium of Mœcenas*, and has been supposed to be the place where poets and other writers read their works to an assembly of Mæcenas and his friends.

Professor Mohr (*Bull. Inst.* 1875) has, however, shown that it really is a greenhouse, and that the apparent seats are stages on which rows of flower-pots were set. The Romans were fond of the cultivation of flowers and shrubs in this way; see also *Bull. Arch. Comm. Rom.* 1874.

On each side of the hall are six recesses, very gracefully decorated with paintings of garden scenes with flowers and fountains, treated in a very realistic way, as if the back of each niche were a window opening on to a garden. The whole walls and vault were covered with similar paintings of trees and flowers very skilfully executed, and apparently contemporary with the building.[1] The hall was covered with a barrel vault in which openings were formed to admit light, there being no windows in the wall.

This once very extensive villa extended over the Servian wall, a long piece of which had been removed to make room for it. The construction of the villa and gardens of Mæcenas over the site of the once squalid pauper cemetery is mentioned at page 423.

The House of Sallust (in the Barberini villa gardens, afterwards called the Spithoever gardens). This villa, with its extensive gardens in the valley between the Quirinal and Pincian Hills near the *Porta Collina*, was originally built by the historian Sallust, with the wealth which he acquired during his administration of the Roman Province of Numidia. After the historian's death it passed to his heir Sallustius Crispus; and when he died in the reign of Tiberius the whole estate became the property of the Crown, and was used by many of the emperors as a favourite residence till as late as the fourth century. It was probably burnt by Alaric, together with the rest of this part of Rome, in 410; Procop. *Bell. Vand.* i. 2.

[1] These fine paintings are now rapidly perishing.

The site of this house is indicated by Tacitus, *Ann.* xiii. 47, and by Procopius (*loc. cit.*); Tacitus mentions that the house was occupied by Nero. Vespasian, Nerva, Severus Alexander, Aurelianus, and other emperors resided there; Dion Cass. lxvi. 10; Hist. Aug. *Aurel.* 49. During excavations made in 1876, lead pipes were found in the existing remains of the villa, inscribed with the capacity of the pipe, the name of the estate, the Imperial owner, and the plumber who made it.

XIII. ORTORVM · SALLVSTIANOR / IMP · SEV · ALEXANDRI · AVG · } NAEVIVS · MANES · FECIT.[1]

Flaminio Vacca, writing in 1594, describes the result of excavations made here in his time.[2]

Very richly decorated rooms were found, especially a magnificent oval hall surrounded with Corinthian columns of Numidian *Giallo*, 12 feet long. This hall had four entrances with descending marble steps, and by each doorway were two columns of translucent alabaster. There were rich marble pavements, and beneath a large *cloaca*. The *Giallo* columns were cut up and partly used to make the altar-rails for the Church of S. Pietro in Montorio; the alabaster columns have disappeared. During recent excavations many fine pieces of sculpture and architectural decorations were discovered, and a number of fine rooms, in parts four stories high, have been exposed.

The house occupies an unusual position; it is built partly in the valley at the foot of the cliff of the Quirinal, where its upper edge was skirted by the wall of Servius; part of this wall had been removed and the upper stories of the house extended over the higher level of the hill, so that the third floor of the part of the house which stood in the valley was level with the ground floor on the top of the hill. Some of the existing walls are over 70 feet in height. The rooms on

[1] Lanciani, *Coment. di Frontino*, 1880, p. 224.

[2] *Memorie di Vacca*, pp. 24–26; printed in Nardini, *Roma Antica*, Ed. Nibby, 1820, vol. iv.

the higher level are mostly destroyed, though scattered lengths of walls show how wide the extent of the house once was. These walls are of concrete faced with mixed brick and *opus reticulatum*, and evidently belong to the first century A.D.

At a little distance are some immensely thick and lofty walls formed of cast concrete without any facing, dating probably from the second century. The print of the boards and the upright timbers of the framing, in which the fluid concrete was poured, are very clear and sharp. These rock-like walls are being blown up with gunpowder, and broken into lumps to use in the foundations of the new boulevards, which are being built here. The same fate has attended the valuable remains of the wall of Servius near this site, except that it was much easier to demolish than the solid concrete walls of the empire. The great blocks of tufa were removed one by one, and broken up to make the rubble walls of the new "jerry-built" houses. Still further devastations are being committed, and the very aspect of the ground completely changed.

The whole valley which contained the villa and gardens of Sallust is being rapidly filled up to a level with the top of the cliff, thus obliterating the contours of both the Quirinal and Pincian Hills on this side. This is only a part of a wholesale scheme called the *Piano regolatore*, the object of which is, as much as possible to get rid of the hills and valleys of Rome, and lay out a new city resembling a Parisian suburb.

That part of the *House of Sallust* which stands at the foot of the Quirinal cliff is well preserved; see fig. 50. The central room is a large circular hall covered with a lofty dome, on to which other rooms open. This hall is a nobly designed room of good proportions, once lined with rich marble, and decorated with statues in semi-circular niches. A wide and handsome staircase leads out of a square vaulted room separated from the circular hall by an antechamber. On the

side towards the cliff is an open court, with four or five stories of rooms on two sides of it.

The cliff itself is masked by a brick-faced concrete wall

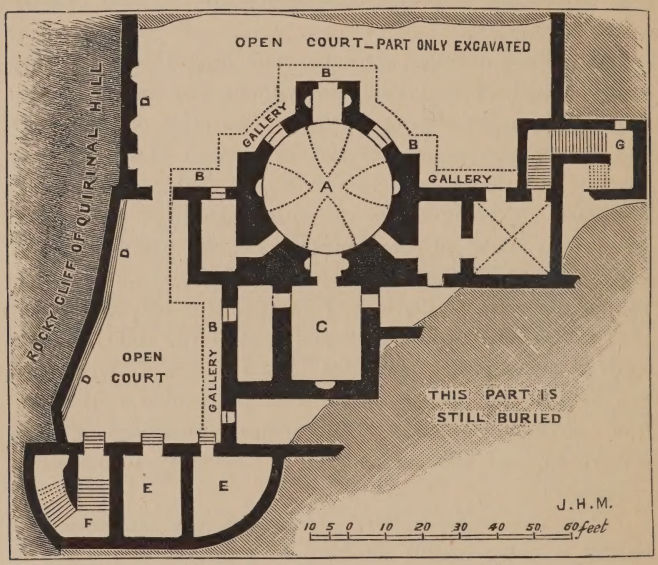

Fig. 50.

Existing part of Sallust's Villa set against the cliff of the Quirinal.

A. Lofty domed hall; the dotted lines show the contour of the vault.
B B B. Concrete gallery running round the outside of the main building, supported on corbels, about 40 feet above the ground.
C. Fine vaulted room three stories high.
D D. Retaining wall against the cliff.
E E. Rooms four or five stories high, some with wooden floors.
F. Winding stairs, with marble steps and mosaic landings, leading to the top of the house and the rooms on the higher level of the hill; at this part the building is still about 70 feet high.
G. Another marble-lined staircase.

with stepped offsets, set against it as a retaining wall to prevent the tufa rock crumbling away. Round three sides of this open court, at a great height from the ground, a project-

ing gallery ran, supported by brick-faced arches resting on large travertine corbels, all decorated richly with stucco reliefs, in much the same way as the bridge in Caligula's Palace on the Palatine. A similar balcony-like gallery appears to have run round the upper part of the front of the Circular Hall.

From the last mentioned court a staircase starts planned in a curious winding way, so as to occupy little space. It led from the lowest level up to one floor after another till it reached the top of the cliff, and the rest of the house at the higher level. The steps and dado of the stairs are of marble, and the landings of simple mosaic patterns, while the upper part of the walls and the raking vault over the stairs are covered with paintings on stucco. The whole effect of this lofty house is very stately, and many most interesting details are well preserved. The upper floors were in some cases of concrete, in others had wooden joists supported on rows of travertine corbels. Examples still exist here of concrete floors formed without any curve or arch, but simply flat slabs about a foot thick, treated exactly as if the concrete were a solid piece of stone, like that in the *House of the Vestals*, shown on p. 189. The facing of the concrete walls in this lower part of the house is of brick only, no *opus reticulatum* is used as it is in the stories above the top of the hill. This brick-work is very neat and regular, with hard well burnt red bricks $1\frac{1}{8}$ to $1\frac{1}{4}$ inch thick and 12 inches long, with joints $\frac{1}{4}$ to $\frac{3}{8}$ inch thick. This facing is studded with marble plugs and metal nails to form the key for the cement.

Part of the wall of the open court is covered with the usual fine hard stucco made of pounded marble (the *Cœmentum Marmoreum* of Vitruvius) with a highly polished surface, which once must have looked almost exactly like real marble, and was nearly as hard and durable. In order to increase the imitative effect the stucco was divided by a series of sunk lines into sham blocks of marble with draughted edges, such as were often cut in real marble to make the blocks seem

smaller than they really were, and so increase the apparent size of the building; see page 259. In spite of its deeply sunk position the house appears to have been kept perfectly dry by the massive retaining wall against the cliff, and by a complicated system of large *Cloacæ* which run under the lowest floor of the building.

The form of part of the valley (now almost filled up) in which the house stands, seems to indicate that a circus existed in it; this also appears probable, from the discovery in the supposed site of this "Circus of Sallust," of the obelisk which now stands at the top of the Trinità de' Monti stairs; obelisks being very commonly set on the *Spinæ* of the *Circi* of Rome. The *Porticus*, a thousand yards long, in which Aurelianus is said to have been in the habit of riding, and which is mentioned as being part of the estate of Sallust, very probably was round the circus; Hist. Aug. *Aurel.* 49. The statement (Livy, xxx. 38,) that it was once proposed to hold the games in honour of Apollo by the Temple of Venus Erycina, which stood in these gardens, has been supposed to indicate that a circus existed here in the time of Livy, who died in A.D. 17. The name of this estate, which it retained for more than three centuries after it had become Imperial property, was *the Gardens of Sallust* (*Horti Sallustiani*); though the actual house, built by the historian at the end of the reign of Julius Cæsar, probably disappeared very soon under the Imperial additions and reconstructions. Nothing is now visible which appears to be earlier than the Christian era.

Within the limits of the *Horti Sallustiani* stood an ancient temple of *Venus Erycina*, which Livy, xxx. 38, says was outside the *Porta Collina*, and Ovid, *Fast.* iv. 871, calls *Collinæ proxima portæ*; see Gruter, *Inscrip.* xxxix. 4 and cii. 1. This shows that these beautiful gardens must have extended beyond the modern Via Venti Settembre, and the Ministero delle Finanze, under which was the site of the Colline gate. Some enormously massive concrete foundations, which the Comm.

Lanciani thought were the substructions of the Temple of Venus Erycina, were recently exposed and then destroyed. Close by these gardens, but inside the Colline gate, was the *Campus Sceleratus*, where Vestals who had broken their vow were buried alive; Dionys. ii. 67; and iii. 67; Livy viii. 15; and Plutarch, *Numa*, 10.

During the removal of a great piece of the right bank of the Tiber in preparation for the new embankment, several fine private houses were found, facing close on to the river. These were richly decorated in the usual Roman way with marble columns and wall-linings over the brick-faced walls of concrete, and had many fine mosaic pavements. Some of the rooms, especially in a house in that part of the Farnesina gardens which has been cut away, were magnificently decorated with paintings and stucco reliefs, probably the finest that have yet been found in any Roman house, and evidently dating from the early part of the first century A.D. The wall paintings were executed by the same methods as those of Pompeii and the house on the Palatine (see p. 99),[1] but a few were of unusual style, simpler in treatment than the common Roman types, and of a much more refined and truly decorative style, almost pure Greek in design, and having much resemblance to the beautiful though sketchy paintings on the white funeral *lecythi*, so many of which have been found in the tombs of Attica, dating mostly about the time of Alexander the Great. In these the treatment is kept very flat, the design being mostly expressed by firm painted outlines, as on most Greek vases. One very beautiful figure, thoroughly Greek in style, represents a young lady clad in a *Stola* with very graceful and simple folds, and with a veil over her head; she is seated, and pours perfume from a small *aryballos* into an *alabastrum*; see fig. 51.

[1] The painting of Argus, Hermes, and Io, though probably by a Greek artist, is thoroughly Roman in style, or rather that debased form of Greek art which passes for Roman.

Some of the stucco reliefs with figure subjects, which are arranged in panels with moulded framing and scroll foliage round them, are of extraordinary beauty, both for modelling

Fig. 51.

Wall painting, from a house by the Tiber, now destroyed.

and composition, in some respects even finer than the wonderful tomb on the Via Latina, which has reliefs of subjects from Homer's *Iliad*.

Those in the house by the Tiber are of earlier date—early in the 1st century A.D., and are modelled with marvellous

spirit and refined taste, executed rapidly by the artist in the quick-setting wet stucco, which he applied in lumps on to the already hard ground of the panel; and quickly, before the stucco had time to harden, moulded the figures into shape with his fingers and thumb, assisted by a few simple wooden tools. The decision and rapid skill with which every touch on the wet stucco was applied is most admirable, and the result is that an amount of vigour and life appears in these hastily executed reliefs such as it would have been impossible quite to equal by the slow process of chiselling a hard substance. Apparently the only guide which the sculptor had to help him was a mere sketch in outline, incised before beginning on the flat surface of the panel. It would be difficult to find any other examples equal to these in the perfection of combined training of hand and eye.

Many of the scenes represented are Dionysiac—fauns playing on the double pipes, nymphs with timbrels and other musical instruments, sportive genii bearing the *thyrsus* or bunches of grapes, and Silenus reeling under the influence of wine.

Some figures of winged victories are marvels of delicate grace in their pose, lightly poised on their large wings, and in the flowing curves of their drapery gently floating behind them and indicating their forward movement. These especially are of pure Hellenic style, and much resemble the beautiful reverse on a Syracusan Tetradrachm of Agathocles, about 308 B.C., which has a standing figure of Victory fixing armour to a trophy.

Some draped figures of Bacchanals are remarkable for their dignity and simply designed drapery, slightly indicating the form beneath. The modelling of the nude, especially some of the faun-musicians, shows very complete knowledge of the human form; the play of the muscles under the supple skin is rendered with perfect taste, and free from the anatomical exaggerations of the late Athenian school. The sculptors of

these reliefs probably aimed at no originality, but had the good taste to select the most excellent models from among the countless works of Greek art of all periods with which Rome was then crowded to an almost inconceivable degree.

As appears to have been always the case, these exquisite reliefs are tinted with colour to increase their decorative effect, in some cases very slightly, the figures themselves being left white and merely the ground of the panel coloured. The enriched mouldings which formed frames round the panel subjects were more freely coloured, and in many places gold was introduced, especially among the egg and dart enrichments, of which the Romans were specially fond.

Though the houses which were so sumptuously decorated have been completely destroyed by the widening of the river, some of the paintings and reliefs were cut off the walls and have been preserved, though in a sadly damaged condition. Apart from this they have suffered greatly by removal, as a great part of their beauty depended on their perfect adaptation to their architectural surroundings, and the unity of the whole wall design of which each picture or relief formed an essential part.

Technical Methods employed in the Mural Paintings of Rome.

Wall-paintings in Rome were executed either on a thick coat of stucco, or on stone, or marble thinly coated with stucco, or on slabs of terra-cotta. In the latter case the colours were probably such as would stand fire, and so could be fixed on the surface of the clay by a second baking. This method was probably derived from the Etruscans, whose tombs were frequently ornamented with large slabs of painted earthenware, of which fine specimens are preserved in the Louvre. Some of these slabs are nearly six feet long, and must have required great skill to fire them without their being warped out of

shape. It is probably to this kind of painting that Pliny (*Hist. Nat.* xxxvi. 64) alludes in describing the manner in which Agrippa decorated his *Thermæ—figulinum opus encausto pinxit in calidis, reliqua albario adornavit;* that is to say, that in the hot rooms pictures on baked clay were used, while in the other rooms the paintings were on white stucco. The more durable paintings on clay were no doubt used for the hot rooms in order that they might not be injured by the condensed steam and the heat of the furnace beneath. Even when the surface to be decorated was of white marble it was usual to cover the surface with a thin coat or priming of stucco made of lime and powdered marble, in order to supply to the painter a more absorbent surface than that of the hard marble; this was called *opus albarium*, and marble so treated was called *dealbatum*.

This was also the practice of the Greeks; the great marble hall (*pinacotheca*), which forms one wing of the *Propylæa* on the Acropolis of Athens, has still remains on the massive Pentelic blocks of its interior of a thin stucco priming, on which Polygnotus, about 460 B.C., painted his far-famed historical pictures of the Greek victories over the Persians at Marathon and Salamis.

In the case of private houses in Rome the wall paintings were usually executed on stucco applied in three to five coats, and prepared in the most careful way. If the wall was thought likely to be damp it was often covered with flanged tiles fixed with iron T clamps, as is recommended by Vitruvius, vii. 4; this is the case in the Palatine house; see page 103.

A very minute account is given by Vitruvius (vii. 3) of the manner of preparing and laying the stucco to receive wall-paintings. It is needless to quote Pliny's remarks on this subject, and that of pigments and vehicles, as they are simply copied from Vitruvius, in some cases word for word.[1]

[1] Pliny usually quotes his authority, but in the case of his frequent borrowings from Vitruvius he has not done so.

The first coat of stucco was of lime and coarse *pozzolana*, exactly the same as the mortar used in the joints of brick-facings; over this rough coat another was spread, often made with lime, sand, and finely crushed pottery, *testæ tunsæ;* the third coat was of coarsely pounded white marble, lime, and sand, the next more finely crushed without sand, and the finishing coat of pure white lime mixed with almost impalpable marble dust, which set very hard and received a polish as brilliant as that of real marble. The instructions given by Vitruvius are not clear without a careful examination of existing specimens; a large number of these show successive coats, such as are described above, but in the commoner houses or inferior rooms less care was taken, and there are frequently only three coats of stucco. A great part of the brilliance of the Roman colours on stucco depends on a mechanical polish.

The whole mass of stucco, including all the coats, was called *Opus tectorium*, the layers made of pounded pottery was *Opus e testis tunsis*, and the white finishing coats were called *Opus albarium* or *Cæmenta marmorea*. The mouldings and other reliefs were made of mixed powdered marble and gypsum—plaster of Paris.

The paintings on the prepared stucco were executed in many different ways, and with a great variety of vehicles.

These methods may be divided into four kinds:—

I. *Fresco;* II. *Tempera;* III. *Varnish paintings*, resembling modern painting in oil; IV. *Encaustic*.

The first of these, true *fresco*, or *fresco buono* as it is now called, is mentioned by Vitruvius, vii. 3,—*colores autem udo tectorio* (moist stucco) *cum diligenter sunt inducti, ideo non remittunt* (do not fade).

It appears, judging from existing examples, to have been chiefly used for the plain colouring of large surfaces, or for the grounds of figure subjects.

The colour applied to the wet surface of a freshly applied patch of *Opus albarium* sank slightly into the stucco, and

stained a thin skin extending below the surface, so that it could receive a mechanical polish without the colour being rubbed off, as would have been the case if it had merely rested on the surface. Only earth or mineral pigments could be used for this work on wet stucco, owing to the corrosive properties of wet lime, hence the colours were limited in number, and had not brilliance enough of tint to please the Romans, who delighted in gaudy hues: on this account it was not very much used, except for plain grounds.

II. *Tempera* or *distemper* paintings were executed on dry stucco, with a medium of gum, size, or the glutinous sap of the fig-tree. Any pigments could be used for this, but the work was perishable, and could not stand weather or damp.

III. Another method was to use resin, bitumen, or mastic for a medium, probably dissolved in a natural mineral oil, as the Romans do not seem to have practised the distillation of essential oils. This method had the advantage of being able to resist external wet, and any pigments might be used.

IV. The Encaustic method seems to have been that which was chiefly employed in wall painting. The medium used was melted white wax (*Cera Punica*) mixed with oil to make it more fluid. The pot containing the wax was kept over a brazier, while the painter was at work, in order to keep the melted wax from solidifying. The stucco itself was prepared by a coating of hot wax applied with a brush, and it was polished by being rubbed with a wax candle, and finally with a clean linen cloth. After the picture was painted the wax-colours were fixed, partly melted into the stucco, and blended with the wax of the ground by the help of a charcoal brazier, which was held close to the surface of the painting, and gradually moved over its whole extent. Vitruvius (vii. 9) says—"*Cum paries expolitus et aridus fuerit, tum ceram Punicam igni liquefactam paulo oleo temperatam seta* (a brush) *inducat; deinde postea carbonibus in ferreo vase compositis eam ceram apprime cum pariete calefaciundo sudare cogat, fiatque ut per-*

æquetur: deinde tunc candela linteisque puris subigat, uti signa marmorea nuda curantur."

Pliny (*Hist. Nat.* xxxv. 39) describes the process thus—"*ceris pingere ac picturam inurere.*" This process was called *encaustic* (ἐγκαυεῖν) or "burnt in," from the way in which the brazier was used to fix the colours on the walls. Greek painters, according to Pliny (*loc. cit.*), frequently signed their works ἐνέκαεν, "*burnt in*," instead of "painted." The colouring of statues, mentioned by Vitruvius in the above quoted passage, was done, not usually by the sculptor, but by a much honoured class of artists called ἀγαλμάτων ἐγκαυσταί: see Plutarch, *De glor. Athen.* vi; and Pliny, *Hist. Nat.* xxxv. 40. Pliny's remarks on encaustic painting (*Hist. Nat.* xxxv. 41) are unintelligible, and the reading appears to be corrupt; his meaning is, however, quite plain at xxxiii. 40, but here he is simply copying from Vitruvius, vii. 9.

In Pliny's time (*Hist. Nat.* xxxv. 37) distinguished artists devoted themselves to easel pictures (*tabulæ*), and the decoration of walls was probably left to an inferior class of painters; a large proportion of the existing examples in Pompeii and Rome are evidently the work of very inferior artisans.

In the republican period things were different; mural paintings appear to have taken the first rank, and were painted by the most celebrated painters, some of whom belonged to wealthy Roman families; as, for example, Fabius, surnamed *Pictor*, from his skill as an artist, who decorated the walls of the *Temple of Salus*, which was built about 304 B.C., and was burnt in the reign of Claudius. Paintings were executed on the walls of the *Temple of Hercules* in the *Forum Boarium* about 180 B.C., by the tragic dramatist Pacuvius, the nephew of the poet Ennius.

In 1884, near the Porta S. Lorenzo, during the excavations made for the construction of the new road and gateway in the Aurelian wall, which is to be used instead of the ancient gateway of Augustus's time, extensive remains were exposed of

a long street of houses, against the back of which the wall of Aurelian had been built. Some of these houses were faced with neat *Opus reticulatum* of the first century B.C.; others had the finest and most closely jointed brick facings, and dated from the first century of the Empire; they had been richly decorated with marbles and mosaic. Many of these houses had been built against the piers of the aqueduct which conducted the *Aquæ Julia*, *Tepula*, and *Marcia*, one arch of which, rebuilt by Augustus, forms the Porta S. Lorenzo; see page 469. A number of the piers of this aqueduct, built of massive blocks of tufa and peperino, existed at this place as high as the springing of the arches, and had evidently been partly hidden by this long row of houses. The whole of these interesting remains and the piers of the aqueduct have been destroyed.

In June of 1884, a fine house of the end of the first century A.D., with walls covered with painted decoration, was discovered in digging foundations on the slope of the Quirinal near the Colonna gardens, and shared the fate of countless other fine buildings that have been found during the recent laying out of new lines of boulevards.

Several of the barracks (*excubitoria*) of the various Cohorts of the Roman *Vigiles* (see page 243) have been discovered. The central depôt is buried beneath the Palazzo Savorelli; that of the 2d Cohort was found on the Esquiline near the (so-called) *Temple of Minerva Medica;* that of the 3d Cohort was discovered in 1873 near the Baths of Diocletian; see *Bull. Comm. Arch. Rom.* 1873. The most perfect of all is that of the 7th Cohort, near the Church of S. Crisogono in Trastevere. It is a fine house of the second century A.D., with a large open court or Atrium paved with mosaic, round which a number of rooms were arranged two or three stories high; some of these were handsomely decorated with marble wall linings. On one side a porch projects into the Atrium, of the usual brick-faced concrete, with rich decorations in moulded

terra-cotta; this entrance has an archway between two Corinthian pilasters which carry an entablature and pediment; the Corinthian capitals and all the mouldings are of terra-cotta, very similar in style to those of the *Amphitheatrum Castrense*, and like them was once decorated with brilliant colours, with which the various members of the mouldings were picked out. See Visconti, *Coorte* vii *de' Vigili*, 1867, and De Rossi, *Vigili*, in the *Ann. Inst.* for 1858.

CHAPTER XIII.

TOMBS AND HONORARY MONUMENTS.

As was the case with the Etruscans the Romans sometimes burnt their dead, and sometimes buried them unburnt. On the whole burning was the most common; but some families, such as the Gens Cornelia adhered to the other custom, at least for the greater part of the Republican period. Sulla the dictator is recorded to have been the first member of the Cornelian family whose body was burnt. The bodies of the emperors during the first three centuries of their rule appear to have been burnt on very magnificent pyres, from which in some cases an eagle was set free as the flames kindled, and flying up symbolised the escaping soul of the dead emperor or empress; see Herodian. iv. 2. This is represented on many coins, with the legend CONSECRATIO, and was usually followed by the deification of the dead person. On the pedestal of the column of Antoninus Pius a relief represents the emperor and his wife Faustina borne heavenwards by a Genius with spreading wings; on each side an eagle is flying upwards. Allegorical figures of Rome and the Campus Martius point out the scene of the funeral rites.

According to the law of the XII Tables, which mention both burning and whole interment, burial within the walls of Rome was strictly prohibited, and was only permitted by the Senate in a few rare cases as a special honour. This happened in the case of Publicola, whose modesty in moving his residence

to a humble position was highly appreciated; Plutarch, *Public.*; and Cic. *De Leg.* ii. 23; see p. 135.

The tombs of Rome were arranged in two different ways; one was to have extensive *Columbaria* or catacombs, which were sometimes the property of one wealthy *Gens;* or, under the empire, occasionally belonged to a sort of company, which sold chambers or recesses to any buyers. These were either wholly excavated below the ground or in the side of a hill, or were partly built above ground, with rows of niches like pigeon-holes all over the walls, whence the name *Columbarium* (dove-cot); each niche contained a vase with the ashes of one person.

During the time of the empire it appears to have been frequently the custom for the members of wealthy families to be buried unburnt in Sarcophagi, while their slaves and freedmen were burnt, and their ashes set in niches in the walls of the large chambers, in which the Sarcophagi stood.[1]

The other chief form of tomb was an isolated monument set by the side of one of the roads which radiate from Rome. The line of the ancient roads, and consequently the position of the gates in the Servian wall has in many cases been established by the discovery of some of the tombs which bordered the road commencing immediately outside the gate.

The frontage on to the principal roads thus became of great value, and the monuments usually had at the end of the inscription a record of the exact frontage along the road, and depth inwards toward the fields which belonged to the family who owned the tomb; examples occur on the Appian way, and elsewhere in this form—IN · FRON[TE] P[EDES] X IN · AGR[VM] P[EDES] XX; *i.e.* 10 feet frontage by 20 feet deep.

[1] In some cases the cinerary urns were not set in niches, but on a long shelf, moulded like a cornice, which was raised 7 or 8 feet above the floor. This was the arrangement in the tomb of the Pancratii, on the Via Latina, the vault of which is decorated in the most magnificent way with stucco reliefs and painting.

A sepulchral inscription, built into the walls of the Narthex of S. Maria in Trastevere, which records that a freedman named Ambrosius lived for forty-five years and eleven days with his wife Cocceia, without one quarrel, concludes with the usual statement of the size of the plot of land IN · FRONTE · P[EDES] XVI · IN · AGRO · P. XXII.

This system of measurement is mentioned by Horace (*Sat.* i. viii. 12)—

> "*Mille pedes in fronte, trecentos cippus in agrum*
> *Hic dabat; heredes monumentum ne sequeretur.*"

In the same passage Horace describes the squalid appearance of a cemetery on the Esquiline, outside the Agger of Servius, in which paupers and uncared-for slaves were buried (without burning) in shallow graves, so that the ground was strewn with bleaching bones.

This site as Horace mentions, was afterwards laid out with beautiful gardens and a park by Mæcenas, who built himself a villa on the line of the ancient *agger;* see p. 405.

The Tomb of the Scipios; Gens Cornelia.[1]

This is the most ancient of the Roman burial-places which are now known to exist; it is excavated in the tufa rock at a point facing on to the *Via Appia*, near the *Thermæ* of Caracalla, and extends a considerable distance into the fork formed by the junction of the *Via Latina* with the *Via Appia.*

It was first opened in 1780, and in it were found a large number of slabs of *peperino*, inscribed with the names and titles of many members of the Scipio family.

Owing to the custom of interment without burning, which was kept up by the Cornelian Gens, the bodies were laid in *loculi*, rock-cut recesses, the side of which was closed by a

[1] This is not, strictly speaking, a *Columbarium*, as it contains large recesses for the corpses, not the small niches which were used to hold ashes.

large slab of stone, on which the sepulchral inscription was cut, and the incised letters then coloured red. This tomb consists of a number of narrow passages cut in the tufa rock, winding about in various directions, and excavated at different times as more room was required. At the opening into the rock an entrance was built of massive blocks of peperino, with a plain arch, 5 feet in span, supporting a simple moulded architrave.

The inscriptions, of which many exist, dating from the beginning of the third century B.C., are among the most important extant examples of early Latin palæography. The originals have been removed, and have mostly been placed in the Vatican; their places are supplied by modern copies, many of which are blundered. The form of some of the letters differs from that afterwards used, especially the L and R, which resemble the early Attic Greek form of these characters. The most important discovery made was a large sarcophagus, cut out of one block of peperino, and inscribed with the epitaph of Lucius Cornelius Scipio Barbatus, who was Consul in 298 B.C. (Livy, x. 12–13), and was the great-grandfather of Scipio Africanus, elected Consul in 134 B.C. The sarcophagus (now in the Vatican) is decorated with a frieze, sculptured with Tuscan triglyphs and rosettes in the *metopes*, and has a simple cornice with large *cymatium* and *dentils;* the inscription is incised on the lower plain part of the sarcophagus, which occupies the place of the architrave. The lid was cut out of another block, and is decorated with volutes at its angles. It was broken when the tomb was rifled in 1780, and about half is a modern restoration. The very valuable inscription, in rude Saturnian verse, runs thus—CORNELIVS · LVCIVS · SCIPIO · BARBATVS · GNAIVOD · PATRE · PROGNATVS · FORTIS · VIR · SAPIENSQVE — QVOIVS · FORMA · VIRTVTEI · PARISVMA · FVIT—CONSOL · CENSOR · AIDILIS · QVEI · FVIT · APVD · VOS — TAVRASIA · CISAVNA · SAMNIO · CEPIT — SVBIGIT · OMNE · LOVCANA · OPSIDESQVE ·

ABDOVCIT ; i.e. "*Cornelius Lucius Scipio Barbatus* (*the bearded*), *born of his father Gnævus, a brave man and a wise ; whose form was fully equal to his worth, who was among you as Consul, Censor, Ædile ; Taurasia, Cisauna he took from the Samnites ; he subdued all Lucania, and carried away hostages.*" Many interesting archaisms occur in this inscription.

When the sarcophagus was broken open a skeleton in good state of preservation was found in it, and on one of the fingers a gold ring with an engraved gem,[1] which Pius VI. gave to the French antiquary Dutens, from whom it passed into Lord Beverley's Collection. The poet Ennius was buried in this tomb, and his statue was placed in front of the entrance. The name of Ennius has been given, but without reason, to a youthful bust crowned with laurel, cut in peperino, which was found in the tomb, and is now placed on the sarcophagus of Scipio Barbatus. Other inscriptions were found to Lucius Cornelius Scipio, the son of Barbatus, who was Consul in 259 B.C., when he seized Corsica and Sardinia after the defeat of the Carthaginian Hanno ; also two sons of Scipio Africanus, and his brother Scipio Asiaticus, with other members of the family. The great Scipio Africanus, who died in 185 B.C., was not buried among his ancestors, but near his villa at Liternum ; Cicero, *Cat.* 6.

This very ancient burial-place continued in use under the empire, and was continually enlarged ; the tufa rock is in places supported by brick-faced concrete of the second century A.D. The inscriptions are given by Mommsen, *Cor. In. Lat.* i. p. 11 *seq.*

Besides the Tomb of the Scipios, a great part of the fork made by the *Via Appia* and *Latina* contains many other burial-places in the form of *Columbaria ;* five of these are accessible, two can be entered from a door in the wall of the Vigna Codini, close by the *Porta Latina*, and others from the Appian way. These are mostly excellent and well preserved

[1] A sard, with a standing figure of a Victory, of early Latin workmanship.

specimens of the methods of interment used under the empire, and appear to have been used for servants and officials in the household of the emperors, such as the Imperial physicians (*medicus*), accoucheurs (*obstetrix*), musicians (*auletes*), silversmiths (*argentarius*), librarians (*bibliothecarius*), footmen (*pedissequus*), jesters (*lusor*), and a lady's-maid (*ornatrix*). One of the servants was a dumb man, buffoon to Tiberius (*T. Cæsaris lusor*), whom he amused by mimicking the gestures of legal advocates, as is recorded in his epitaph. The librarians are mentioned as being in charge of the library in the *Porticus Octaviæ*, and in that of *Apollo Palatinus;* see p. 107. In one case the ashes of a lapdog are placed in a niche with an inscription calling the dog "the delight of its mistress." These *columbaria* are sunk in the tufa rock, and their walls lined with concrete faced with brick, or *opus reticulatum;* they are in some cases decorated with stucco reliefs or mosaic.[1] The niches are arranged in many tiers reaching to the top of the lofty walls of the chambers; those for slaves are usually small semicircular recesses, just large enough to hold a small earthenware pot (*olla*). Others for officials of rank are frequently square niches about two feet wide, lined with marble or enriched stucco, and containing miniature marble sarcophagi to hold the ashes, some of which are richly ornamented with sculptured reliefs, and are in some cases cut into the form of small temples or ædiculæ, worked with the most minutely detailed ornaments and figures. A cinerary urn, now in the Museum of the Palazzo dei Conservatori on the Capitol (terra-cotta room), is of the most costly description; it is a plain circular vessel cut out of a block of the beautiful translucent oriental alabaster, the much valued *onyx* of Pliny. This is enclosed in a leaden vessel, and the whole protected by being

[1] The amount of splendid decorations lavished on the sepulchral chambers of Rome is very remarkable. Most, such as the magnificent tombs on the Via Latina, can only have been lighted by lamps, and were probably but seldom seen.

set in a large earthenware jar or *dolium*. Glass vases of graceful shape were often used to contain ashes, and these were usually enclosed in an outer jar of coarse pottery. In some cases there has been one or more tiers of projecting wooden galleries corbelled out from the face of the wall, so as to give access to the higher rows of niches. The main stairs leading down to the tombs were of marble or large tiles, *tegulæ bipedales*.

In some of the earlier Roman tombs, which were sunk below the level of the ground, access was given in a very curious way. A number of clay cylinders were made by a potter, just large enough to admit the body of a man, and these were piled one above another, reaching up to the surface of the ground, exactly like a large chimney; foothold was given by a series of holes or sinkings in the sides of the cylinders, and the top was closed by a circular terra-cotta lid.

One of these curious staircases, to descend which must have required almost the skill of a chimney-sweep, is preserved in the same room as the alabaster urn; on the lid is painted a name—EGO C . . . ANTONIOS—in archaic Latin characters, apparently dating from about the 4th century B.C.

Space will not allow of a description of the other numerous *columbaria* that have been discovered in Rome, but the positions of a few of the principal ones may be noted.

One of the largest of the *columbaria* which was discovered at the beginning of the last century has now wholly disappeared, except its inscribed slabs to the number of over 300, which are preserved in the Capitoline and Vatican collections. The importance of this tomb, which contained the ashes of the freedmen of Augustus and his wife Livia, may be judged from a well-illustrated work published soon after its discovery—Gori, *Columbarium libert. et serv. Liviæ*, Rome, 1727. The site of this was on the Via Appia.

A large group of *columbaria* was discovered a few years ago near the so-called *Temple of Minerva Medica*, in the fork between

the *Via Prænestina* and *Labicana*, but after being rifled of their contents, and much injured in the search for statues and other objects, were again buried in earth. Many hundreds of terra-cotta lamps, and vessels in both fictile ware and glass, with over 200 inscribed marble slabs, and countless other objects, were taken from these interesting and now lost remains.

Another *columbarium* by the *Via Prænestina*, not far from those last mentioned, is interesting as having been constructed by the historian of the Punic Wars, Lucius Arruntius, Consul in 6 A.D., as a burial-place for his slaves and freedmen. This was recorded on an inscribed slab placed over the entrance. Near it is another tomb consisting of one vaulted chamber, decorated with paintings and stucco reliefs. This *columbarium* has as yet escaped destruction, but is shortly to be destroyed.

In the garden of the Villa Wolkonsky a fine *columbarium* has been exposed, three stories high, with concrete walls faced mainly with *opus reticulatum*, dating from about the middle of the first century A.D. It is the burial-place of the family of an architect called Tiberius Claudius Vitalis, and was built by another architect named Eutychius. Some interesting bas-reliefs in marble, apparently representing buildings designed by Vitalis, were found within one of the chambers.

The fine *columbaria* recently discovered in the park of the Villa Pamfili-Doria have suffered the usual fate of these buildings in and near Rome; being first rifled of their contents, and then again buried in a sadly damaged condition. A small chamber of classical construction, with two tiers of marble-lined niches, exists below the high altar of S. Maria in Cosmedin, and is made into the *confessio* of the church. This has been called a *columbarium* by some writers, but its position within the Servian wall makes this very improbable.

Tomb of Eurysaces. One of the towers with which Honorius had strengthened the double *Porta Prænestina* and *Labicana* concealed this tomb till 1838, when the tower was pulled down and the tomb found embedded in its thick

concrete walls. It now stands clear of the gate (modern Porta Maggiore). It was originally built in the fork of two roads, the *Via Labicana* and *Prænestina*, and this accounts for its not being rectangular on plan, as two of its sides faced on to and were parallel to these radiating roads. This tomb is very eccentric in form. It consists of a high, plain basement, on which stands an upper structure cut in the shape of three tiers of large circular basins, with their mouths outwards; these are supposed to represent kneading bowls, such as were used by the baker to whom the monument was erected. At the angles are slightly projecting pilasters. The part immediately under the tiers of bowls is formed in the shape of a row of tall cylinders, which probably represent something connected with the baker's trade. The internal mass of the tomb is of concrete, the lower part being of blocks of tufa faced with travertine; the outer casing and sculpture of the upper part is also of travertine. Above the rows of bowls the tomb is decorated with a sculptured frieze, surmounted by a simple semi-Corinthian cornice, with consoles and rosettes under the cymatium, much too small for its place. On the frieze is represented a variety of scenes connected with the trade of a baker—the bringing and grinding of wheat, kneading the bread, raking fuel into the oven, weighing and distributing the loaves, executed with vigour but without much refinement of detail—partly, no doubt, on account of the unsuitable nature of travertine for such small figures.

The monument probably dates from about the middle of the first century B.C., and is inscribed with an interesting epitaph with rather archaic spelling, which is repeated three times on the plain string course which separates the upper and lower stages of the structure. It runs thus—EST · HOC · MONIMENTVM · MARCEI · VERGILIEI · EVRYSACIS · PISTORIS · REDEMPTOR[IS] · APPARET[ORIBVS]. "*This is the monument of Marcus Virgilius Eurysaces, a baker; bread-contractor to the apparetores,*" or servants of the magistrates of Rome.

By it probably stood a somewhat similar tomb to his wife Atistia, of which part only of the inscription now exists—FVIT · ATISTIA · VXSOR · MIHEI——FEMINA · OPTVMA · VEIXSIT——QVOIVS · CORPORIS · RELIQVIAE——QVOD · (*sic*) SVPERANT · SVNT · IN——HOC · PANARIO. "*Atistia was my wife; she lived the best of women; the remains of whose body which exist are in this 'bread-basket.'*" In these inscriptions the dipthong EI is used for long I, as was usual till the reign of Augustus, and XS for the double letter X. It is interesting to compare this method of writing the double consonant with the archaic form of the corresponding Greek letter the Ξ, which till about the end of the fifth century B.C. was usually written by Attic Greeks ΧΣ, *e.g.*, ΕΥΧΣΙΘΕΟΣ for ΕΥΞΙΘΕΟΣ.

Some fragments of sculptured travertine, now set by the side of the modern road, appear to belong either to Atistia's tomb or that of some other baker's tomb; on them are carved in relief representations of flat round loaves, marked with a cross like hot-cross buns, many of which were found at Pompeii.

Part of the *Tomb of Bibulus*, which stood by the side of the *Via Lata* about 60 yards outside the *Porta Ratumena*,[1] still exists built into a modern house in the Via di Marforio. It is built of concrete faced with large blocks of travertine, and is formed in the shape of a small house with a plain base, above which the wall is decorated by simple Tuscan pilasters supporting an entablature with enriched frieze, sculptured with garlands and rosettes between ox-skulls, of which only one fragment remains at the south angle. In one of the panels

[1] Bunsen (*Besch. der Stadt Rom.* iii. p. 35) is mistaken in thinking that this tomb was within the line of the Servian wall; remains of the wall and the *Porta Ratumena* have recently been found under a house, No. 8, in the Via di Marforio, showing that the tomb of Bibulus was not an exception to the law of the XII Tables against intramural burial; see p. 63.

formed by the pilasters there is a large window with a moulded architrave, and in the other narrower spaces two small tablets with miniature cornice. The tomb originally extended beyond the angle of the street, and there was probably another large window in the missing half. On the plain dado is an interesting incised inscription, which is repeated on the end which is partly concealed by the modern house—C · POBLICIO · L · F · BIBVLO · AED · PL · HONORIS—VIRTVTISQVE · CAVSSA · SENATVS—CONSVLTO · POPVLIQVE · IVSSV · LOCVS —MONVMENTO · QVO · IPSE · POSTEREIQVE—EIVS · INFERRENTVR · PVBLICE · DATVS · EST.

"*To Caius Poblicius Bibulus, the son of Lucius, Ædile of the Plebs, on account of his honour and worth, by a decree of the Senate, and by the command of the people, a place has been publicly given for a monument, in which he and his posterity may be interred.*"

Nothing certain is known about this highly honoured Roman; he can hardly be the C. Bibulus mentioned by Tacitus, *Ann.* iii. 52, as being ædile in A.D. 22, as the style of the tomb appears earlier than this.

Remains of other tombs exist a little beyond this one, built into the modern houses; little except their concrete core now remains.

Remains of several tombs were exposed to view by the destruction in 1871 of the Towers which flanked the *Porta Salaria* of Aurelian. One of these in design closely resembles the tomb of Bibulus, and is probably of about the same date. It is specially interesting from its curious mixed construction of several materials, and as an example of the sparing way in which marble, afterwards so common, was frequently used in the first century B.C. The tomb was nearly square on plan; the front facing on the ancient road is decorated with four pilasters and a large central window above a richly moulded plinth; on the other existing side there are three pilasters but no window. The main bulk of the walls is of peperino, very neatly worked and jointed; the deep moulded plinth and

the pilasters are of white marble, and a small sub-base under each pilaster is of black marble. The upper part of the tomb and its entablature are missing; no inscription exists to show whose monument it was.

By the side of this tomb remains exist of another monument built of travertine, surmounted by a coarsely designed cornice; a large marble slab with moulded frame is let into its front, but the panel is uninscribed.

During the demolition of the Aurelian towers of the same gate a marble *cippus* or monument, cut out of one block of marble, was found built into the wall; this commemorates the death of a schoolboy named Q. Sulpicius Maximus, who won the prize for a copy of Greek verses on the subject of the lecture given by Jupiter to Apollo Helios for his rashness in allowing his son Phaeton to drive the chariot of the sun. This unfortunate boy died at the age of eleven, an early victim to competitive examinations. Part of his prize poem is incised on the monument, as well as a full-length portrait relief of the young author holding a scroll in his hand. This interesting *cippus*, now in the Capitoline Museum, dates from the reign of Domitian, who in 86 A.D. instituted this competition which was called the *Agon Capitolinus*. The verses are very creditable to the youthful poet.

Remains of a fine tomb of the *Gens Sempronia* were discovered in 1863, on the slope of the Quirinal, in the modern Via della Dataria; it stands a short distance outside the site of the ancient Servian *Porta Sanqualis*, and was set by the side of the road which passed out of that gate. A part only of the front remains, built of large neatly-jointed blocks of travertine; the structure appears to date from about the middle of the first century B.C. The front has a moulded plinth and a well designed entablature with enriched frieze, sculptured with the Greek honey-suckle pattern. In the centre is a round arched window about 5 feet wide, devoid of any moulding or ornament. Over this window, on the plain surface of the wall, is

an incised inscription—CN[AEVS] SEMPRONIVS · CN[AEI] F[ILIVS] ROM[ANVS]——SEMPRONIA · CN[AEI] F[ILIA] SOROR——LARCIA MV[NATII] F[ILIA] MATER. This tomb is illustrated in the *Bull. Comm. Mun. Rom.* vol. iv.

The *Tomb of Cestius* is of the latter part of the first century, B.C. It is a pyramid of concrete cased with blocks of white marble; 118 feet high, with a base 96 feet square. The whole rests on a massive footing-course of travertine. In the centre of the concrete mass is a small sepulchral chamber, which probably once contained a handsome sarcophagus. The walls and vault of the room are lined with stucco, decorated with paintings of female figures and graceful scroll-foliage, now almost invisible from the damp and smoke to which they have been exposed since 1663, when the tomb was opened.[1] A small doorway on one side now gives access to this chamber, but is not the ancient entrance. At a little distance from the two angles of the pyramid, inside the Aurelian wall, two marble fluted columns have been placed, but are not *in situ*; they may be part of a colonnade which once surrounded the whole monument.

Large well-cut inscriptions exist on two faces of the marble lining; these record that the monument was erected in honour of C. Cestius Poblicius, who was *Prætor*, *Tribune of the Plebs*, and one of the *Septemviri of the Epulones*—C · CESTIVS · L · F · POB · EPVLO · PR · TR · PL · —VII · VIR · EPVLONVM. The second inscription, now outside the wall of Rome, records that the monument was built in 330 days, in accordance with C. Cestius's will, by his heir Pontius Mela, and his freedman Pothus—OPVS · ABSOLVTVM · EX · TESTAMENTO · DIEBVS · CCCXXX · PONTI · P · F · CLA · MELAE · HEREDIS · ET · POTHI · L.

[1] An interesting account of the opening of the tomb, and a description of its paintings, before they were injured by exposure, is given by Ott. Falconieri, *Discorso intorno alla pyramide di C. Cestio*, 1664, reprinted in the fourth volume of Nibby's Edition of *Roma Antica*, by Nardini, 1820.

The Epulones were a *Collegium* of priests who managed the banquets in honour of the gods; the institution of *triumviri epulones* is recorded by Livy (xxxiii. 42) to have taken place in 196 B.C. Their number was afterwards increased to seven. Nothing is certainly known about this C. Cestius; he may possibly be the Roman knight mentioned by Cicero, *Pro. Flacco*, xiii.; and *Ad. Att.* v. 13.

The date of his death is, however, roughly indicated by two marble inscribed pedestals, which were found near the pyramid in 1663, when the ground round it was excavated to the original level. These inscriptions record that C. Cestius died in the reign of Augustus, during the lifetime of M. Agrippa, and that the bronze statues which stood upon them were paid for by the sale of some robes made of gold tissue, called *attalica*, in which C. Cestius had desired to be buried; this, however, being contrary to law (Cicero, *De leg.* II. xxiv. 60) the heir, Pontius Mela, spent the value of the gold stuffs in erecting the two bronze statues. The foot of one of these still exists, fixed to the pedestal, and is colossal in size, showing that the value of the cloth of gold must have been very great.

When the wall of Aurelianus was constructed the tomb of Cestius was built in so as to form part of the line of defence. The old Protestant cemetery with the grave of Keats is under the shadow of this pyramid.[1]

The marble lining was restored in 1663 by Alexander VII., who disfigured one side by cutting a new inscription on it.

At least two other sepulchral pyramids existed in Rome as late as the fifteenth century. One of these, known popularly as the "Tomb of Romulus" or *Memoria Romuli*, stood between the Castle of S. Angelo and the Vatican, and was destroyed by Pope Alexander VI. (Borgia) in 1497, when he rebuilt part of the covered bridge which unites these two buildings. It is shown in a very interesting relief on the bronze doors which

[1] Shelley's grave is in the adjoining enclosure.

belonged to the ancient Basilica of S. Peter's, and now form the central entrance; several other classical buildings are represented, and are all rendered with much minuteness.[1] The so-called *Memoria Romuli* is mentioned by Petrarch in one of his *Epistles*.

Another pyramidal monument stood by the side of the *Via Flaminia*, by the site of the modern Church of S. Maria dei Miracoli in the Piazza del Popolo. This is shown in several old views of Rome made in the fifteenth and sixteenth centuries, and pieces of it were discovered recently when the Aurelian Porta Flaminia was pulled down. See *Bull. Comm. Mun. Rom.*, vol. v. Tav. 20; and De Rossi, *Piante di Roma anteriori al sec.* xvi., Rome, 1879.

Mausoleum of Augustus (modern *Teatro Correa*). This stands near the Tiber, in the *Campus Martius;* it is described by Strabo (v. 3, 8) as a mountain of earth, planted with evergreen trees, raised on a lofty base of white marble 220 feet in diameter. On the summit was a colossal bronze statue of Augustus, and at the sides of the entrance were two bronze columns, inscribed with the sepulchral epitaph in honour of Augustus, a copy of which exists in both Greek and Latin incised on the marble walls of the *Temple of Augustus* at Ancyra. An account of this most important inscription is given at pages 247–9. Suetonius (*Aug.* 100) says that the Mausoleum stood between the *Via Flaminia* and the river, and that it was built by Augustus during his sixth consulship, that is in the year 28 B.C. Owing to this monument being

[1] These noble pieces of bronze casting were made for Eugenius IV., about 1435, by Antonio Filarete and Simone di Ghini; they are described by Vasari in his life of the former with some minuteness; he is, however, mistaken in calling Simone a brother of Donatello. A magnificent bronze effigy in the Lateran Basilica is by the same Florentine sculptor and goldsmith, Simone di Ghini. The doors of St. Peter's show distinctly the work of two hands; the large panels are very inferior to the small reliefs and the rich foliage in the borders.

surmounted by a mound of earth, it is called a *Tumulus* by Tacitus, *Ann.* iii. 9; and Virgil, *Æn.* vi. 875.[1]

As late as the sixteenth century the Mausoleum of Augustus still preserved much of its original form; the mound of earth and garden on its summit still existed, and also portions of its marble decorations round the lower story; see Du Perac, *Vestigj di Roma*, who gives an illustration of its state in the middle of the sixteenth century; this etching shows a statue on each side of the central doorway, and a colossal head over it; in front is a large sarcophagus. The garden on the top is laid out in the stiff Dutch fashion. Nothing now exists but the core of the mausoleum stripped of its once splendid marble linings. It is of massive concrete faced with neat *Opus reticulatum*, which can best be seen in the courtyard of the Palazzo Valdambrini, in the Via Ripetta. Besides the central chamber, which contained the sarcophagus with the ashes of Augustus, a series of fourteen smaller chambers two stories high were formed all round it; in each of these was interred some member of the Julian family, and many of the emperors till the time of Nerva.

The whole interior is disfigured and hidden by a modern circus, which has caused much damage to the sepulchral chambers.

The square travertine basement on which the drum or circular portion stands is wholly buried below the modern ground level. Near the apse of the Church of S. Rocco traces still exist of a portico with rows of columns, which formed the entrance on the south towards the river.

[1] This and other important sepulchral monuments were called *Mausoleum*, after the celebrated Tomb of Mausolus at Halicarnassus, erected by his wife Artemisia, which was called one of the seven wonders of the world. Mausolus, or Maussollus as he is called on his coins, was Satrap of Halicarnassus and Caria 377–353 B.C. Remains of this monument with its sculpture of the school of Scopas and Praxiteles were found by Mr. C. T. Newton, and the decorative portions are now in the British Museum.

Many inscriptions, pieces of sculpture, and sarcophagi or cinerary urns from this mausoleum still exist at various places in Rome; one of these is a fine urn of Oriental alabaster now in the Vatican. The inscribed pedestal which supported the cinerary urn of Agrippina, the mother of Caligula, is now in the courtyard of the Palazzo de' Conservatori on the Capitol. It is inscribed OSSA · AGRIPPINAE · M · AGRIPPAE · FILIAE · DIVI · AVG · NEPTIS · VXORIS · GERMANICI · CAESARIS · MATRIS · C · CAESARIS · AVG · GERMANICI · PRINCIPIS ·

The first interment in this mausoleum was that of the young Marcellus, nephew of Augustus, who died in 23 B.C.; see Dion Cass. liii. 32, and liv. 26, also Virgil, *Æn.* vi. 873–884. M. Agrippa was next buried there in 12 B.C.: being the son-in-law of Augustus, he was interred with the Julian family. Among the other Imperial persons buried in this tomb were Octavia the sister of Augustus, Drusus, Caius and Lucius the two grandsons of Augustus, then Augustus himself, and his wife Livia, Tiberius, Claudius and Britannicus; Nerva's was the last interment here, A.D. 98; after which the tomb was full.

Two obelisks, which are now by the Quirinal Palace and S. Maria Maggiore, were placed by the sides of the entrance to the mausoleum of Augustus, about the end of the first century A.D. In A.D. 509, Alaric and his Goths broke the mausoleum open, and shattered the sepulchral urns in their search for gold. In the twelfth century it was used as a fortress by the Colonna family, and was much damaged by an attack made on them in 1167, and again in 1241. In the seventeenth century, during an earthquake, the vault fell in, and at the end of the eighteenth century the remains of the mausoleum were converted into an open air theatre for bull-baiting and the like.

Near the mausoleum, Strabo mentions (v. 3, 8) a large marble-paved enclosure, surrounded with iron railings, and planted with poplar trees, the καύστρα or *Ustrina Cæsarum*,

where the dead whose ashes were to be interred in the adjoining tomb were burnt.[1] The site of this on the side towards the *Via Flaminia* (*Corso*) was identified by the discovery of six travertine *Cippi*, inscribed with records of the persons whose bodies had been burnt there. Five of these are preserved in the Vatican, in the "*Galleria delle statue.*"

The persons mentioned on these Cippi are three children of Germanicus—Tiberius Cæsar, Caligula, Livilla, and also a son of Drusus named Titus, and one of the Flavian family.

The record of the burning of Caligula's body is this—C[AIVS] · CAESAR · GERMANICI · CAESARIS · F[ILIVS] · HIC · CREMATVS · EST. Another form used on some of the *Cippi* is HIC · SITVS · EST.

The last sepulchral chamber in the Mausoleum of Augustus was filled in A.D. 98 by the burial of Nerva. The ashes of his successor Trajan were placed in a gold vase under his great sculptured column in A.D. 116; Dion Cass. lxix.; and Hadrian then built the enormous mausoleum for himself and his successors to the empire.

This building, which far exceeded in size and splendour the world-famed Tomb of Mausolus, was begun by Hadrian in A.D. 135. It was built near the banks of the Tiber, by the *Pons Ælius*, which Hadrian made to connect it with the *Campus Martius* on the other side of the river.

Nothing remains but its stone and concrete core, so that it is very difficult now to realise its original magnificence, when it was wholly lined with Parian marble, and surrounded by rows of statues between columns of richly coloured Oriental marbles.

Its splendour is described by Procopius (*Bell. Goth.* i. 22), and a representation of its exterior, made in the middle of the fifteenth century, gives some notion of its appearance. This is a relief on one of the bronze doors of S. Peter's, mentioned above, page 435.

[1] The ceremonies performed at the funerals of rich men and the apotheosis of the Emperors, are minutely described by Herodian, iv. 2.

The general form of this mausoleum consisted of a circular drum set on a square basement, and surmounted probably by a conical marble dome; very similar on a greatly enlarged scale to the Tomb of Cæcilia Metella on the Appian Way, and the Tomb of the Plautii, on the road from Rome to Tivoli.

The lower square story was divided into panels by a series of columns; the main circular story appears to have been decorated with external aisles or colonnades in two tiers, along which statues were ranged, one in each intercolumnar space.

The conical dome was probably (see Vacca, *Memorie*, § 61, Nardini, *Rom. Ant.* iv.) surmounted by the colossal gilt bronze fir-cone (*pigna*), now in the court of the Pigna in the Vatican. The whole of the visible exterior was of marble; the inner core, which still exists in a much mutilated state, is built of large blocks of peperino and travertine, surrounding an inner mass of concrete, in which are formed the central sepulchral chamber, and the passages which lead to it.

The main circular story was, with its marble casing, more than 230 feet in diameter, and each side of the square basement measured about 300 feet.

The central vaulted chamber which contained Hadrian's sarcophagus and those of later Emperors is well preserved; it is lined with large blocks of peperino and travertine, and was once faced with rich Oriental marbles, and paved with mosaic, as were also the winding passages which lead with a gentle slope up from the entrance at the ground level to this large chamber, which is nearly at the top of the circular drum.

The Sarcophagus of Hadrian, which stood in a large recess, has been destroyed, but its immense lid, of polished Egyptian porphyry, is now used as a font[1] in the Baptistery of S. Peter's. The sarcophagus itself was used as a tomb for Innocent II.,

[1] The lid was first used as a tomb for the Emperor Otho II., who died in 983, but when his bones were removed to the crypt it was converted to its present use.

1143, but was destroyed in the fire which ruined the Lateran Basilica in the fourteenth century.

The access to the sepulchral chamber is formed in a very curious way by a passage, circular on plan, which winds round the main story, sloping gradually upwards so that a carriage might ascend it, till it reaches the level of the chamber. Midway in its course this passage opens out into another chamber, from the vault of which a shaft ascends to the roof of the mausoleum; another steeply sloping shaft descends from its floor to below the ground level. The use of these two shafts is not apparent.[1]

In the seventeenth century several statues were found in the moat round the building, and probably many others still lie buried there, as it is recorded by Procopius (*Bell. Goth.* i. 22) that the statues which decorated the external colonnades were hurled down by the garrison upon the heads of the Goths under Vitiges, who assaulted the place in A.D. 537.

Among these are the Dancing Faun in the Uffizi at Florence, and the Barberini Faun now at Munich; the beautiful peacocks, worked in gilt bronze with almost Japanese realism, which now stand by the great fir-cone in the Vatican Court, are said to have come from this mausoleum, as did also the colossal head of Hadrian, now in the Vatican Rotonda.

The bronze fir-cone and peacocks stood for some centuries in the Atrium in front of the ancient Basilica of S. Peter, where they were placed by Pope Symmachus (498–514). The fir-cone is shown in the fresco of the old Basilica in the church of S. Martino ai Monti.

After the death of Hadrian in A.D. 138, his mausoleum was used as the burial-place for the families of the Emperors till the time of Sept. Severus, who is said to have built a new mausoleum on the *Via Appia; Hist. Aug. Sept. Sev.* 19 and 24. The first burial in it was that of Hadrian's son Ælius (*Hist.*

[1] Compare the shafts which run upwards and downwards in the pyramid of Cheops.

Aug. Æl. 6), and the last was probably that of Commodus in A.D. 192. In the sixteenth century the inscriptions in honour of Antoninus Pius and Faustina the Elder still existed *in situ;* others, which existed in the ninth century, are quoted in the *Einseidlen MS.* The sepulchral chambers were first rifled by the Goths under Alaric in 410. It is said to have been converted into a fortress by Belisarius a few years afterwards; see Donati, *Roma vetus ac recens*, 1665, p. 476 *seq.* In the pontificate of Gregory the Great (590-604) it was consecrated under the name of *S. Angelus inter nubes*, in consequence of a dream in which the Pope saw the Archangel S. Michael sheathing his sword after a plague which had been devastating Rome.

In the tenth century the Castle of S. Angelo was seized by the Count of Tusculum, and for some centuries was the centre of constant party struggles. It has at various times been called by different names, *e.g.*, the *Castle of Theodoric* in the sixth century, and the *Castle of Crescentius* in the eleventh. The modern rooms and upper part are mainly the work of Alexander VI. in 1495, and the Farnese Paul III., 1534–1550. The colossal bronze angel on the roof was made in 1770 by a Dutch sculptor named Verschaffelt. The long covered bridge which connects the castle and the Vatican was built about 1411 by Pope John XXIII., and was restored by Alexander VI. and other Popes.

Triumphal Arches.[1]

During the later empire there were in Rome about thirty-eight important triumphal arches. The earliest were two erected—one in the *Forum Boarium*, and the other in the *Circus Maximus*, in 196 B.C., by L. Stertinius out of spoils gained in Spain; Livy, xxxiii. 27. In 190 B.C. an arch was erected in honour of P. Cornelius Scipio Africanus across the road lead-

[1] Those in the *Forum Magnum* are described in Chap. V. page 144.

ing up to the Temple of Jupiter Capitolinus; see Livy, xxxvii. 3. On it were fixed seven standards and two horses of gilt bronze, and in front of it two marble basins (*labra*). Nothing now remains of these early arches; and that of Nero on the Capitol, with many others, have now wholly disappeared.

The Arch of Claudius, erected in A.D. 43 to commemorate imaginary victories in Britain, stood across the *Via Lata* (Corso), between the Palazzo Sciarra and the Church of S. Francesco Saverio (Xavier). Its foundations were found in 1882; see *Bull. Comm. Arch. Rom.* vi.; Tav. 4. This arch existed in an almost perfect state till the sixteenth century, when it was destroyed by Alexander VII. The only parts preserved are half the inscribed panel on the attic, which is about seven feet high, and portions of two large reliefs, much mutilated, which are now in the porch of the Villa Borghese.

The inscription, now in the garden of the Barberini Palace, was found buried by the Palazzo Sciarra in 1641 (see Vacca, *Memorie*, printed in Nardini, *Roma Antica*, Ed. Nibby, vol. iv). It has been restored as follows:—

TI · CLAV*dio Drusi F. Cæs.*
AVGVS*to Germanico Pio*
PONTIFIC*i, Max. Tr. P. ix.*
COS · V · IM*p. xvi. P. P.*
SENATVS · PO*p. Q. Rom. Quod*
REGES · BRIT*annicæ Sine*
VLLA · IACTV*ra domuerit*
GENTESQVE B*arbaros*
PRIMVS INDIC*io subegerit.*

The reliefs in the Villa Borghese are noble in style, but are much damaged; they represent colossal figures of Roman generals and standard-bearers, probably in a procession, or listening to an address from the Emperor.

This arch is represented on both *aurei* and *denarii* of Claudius, with the *legend* DE BRITANNIS inscribed over the

arch. On the top is the Emperor in a quadriga between trophies of armour, which were probably all of gilt bronze.

The Arch of Marcus Aurelius stood in the *Via Flaminia*, a continuation of the *Via Lata*, not far from the Arch of Claudius, in the modern Corso, at the corner of the Via della Vite. It also was destroyed in 1563, and six of its sculptured panels were placed in the Palazzo de' Conservatori. They are now on the walls of the staircase.

Some of these reliefs appear to have been removed from the same arch at an earlier period, and were found in the sixteenth century under the church of S. Martina by the *Forum Magnum.*[1]

These are not only unusually fine specimens of Roman sculpture, but are also of special interest for their topographical indications and architectural backgrounds; (1) that with the Emperor offering sacrifice in front of the triple Temple of Capitolinus is of great value for its representation of that temple (see page 231, fig. 25).

Others of these reliefs represent (2) the entry of Marcus Aurelius into Rome after his German victories; with a figure of the goddess *Roma*, who receives him at the gate; (3) *Roma* presents him with the orb of empire; (4) He grants terms of peace to the conquered Germans; (5) He gives an address (*adlocutio*) to the army; (6) the Apotheosis of Marcus Aurelius and the younger Faustina—very similar in treatment to the Apotheosis of Antoninus Pius and Faustina the elder on the pedestal in the Vatican (see p. 449). Another of this fine series of reliefs is in the possession of the banker Prince Torlonia.

The Arch of Titus, in Pentelic marble, was erected on the *Summa Sacra Via* by Domitian, in honour of Vespasian and

[1] The original place of the reliefs from the church is not known, and it is possible that all the reliefs may not have belonged to the same arch, though they agree so closely in style and scale as to make it probable that they did.

Titus, to commemorate the taking of Jerusalem; Josephus, *Bell. Jud.* vii. 5, 7. The central part only is original, the sides were restored in 1823. In the twelfth century the tower of a fortress, the stronghold of the Frangipani family, stood over the arch; this was known as the *Turris Cartularia* or Record Tower. Remains of a massive concrete wall, made of broken bits of marble, still exist near the arch, set among the ruins of an unnamed building in peperino and travertine; see p. 142. The capitals of the engaged columns on each side of the arch are of the Composite style, of which they are the earliest existing examples. On the inner jambs of the arch are two fine reliefs representing the triumphal procession of Titus and his army bearing the spoils from Jerusalem. On one side the short stout figure of Titus crowned by Victory is represented in a quadriga, the horses of which are led by the goddess *Roma;* he is passing under a triumphal arch on which stand two quadrigæ, and he is surrounded by lictors bearing fasces without axes. On the relief opposite, the golden spoils from the temple are being carried along; the seven-branched candlestick, the table for showbread, and the golden trumpets, are the principal objects. These were deposited by Vespasian in the *Temple of Peace*, which occupied the centre of his Forum (see p. 260). Two female heads in slight relief, crowned with laurel, are of great beauty. On the soffit of the richly coffered arch is a relief of the Apotheosis of Titus, borne upwards by an eagle. The external frieze has small sculptured figures representing sacrificial scenes. In the spandrels of the arch are figures of winged Victories bearing trophies, and the key-stones are decorated with figures of Roma and Fortuna, the latter with a cornucopiæ.

Another arch in honour of Titus had been erected in the *Circus Maximus* during his lifetime, in A.D. 80. Its inscription is given in the *Einseidlen MS.;* see also Gruter, *Inscrip.* p. 244. 6.

The richly decorated but coarsely sculptured gateway

which led from the *Velabrum* into the *Forum Boarium*, is not an arch, but a gateway with a flat lintel. Its inscription originally recorded that it was erected in honour of Sept. Severus, his wife Julia, and his sons Geta and Caracalla, by the silversmiths or bankers (*argentarii*), and other merchants of the *Forum Boarium*, in the year A.D. 204. After the murder of Geta in 212, the year after the death of Severus at York, Caracalla destroyed all sculptured representations of his brother, and erased his name from all honorary inscriptions (see p. 217).[1] On this gateway, as on the arch of Severus in the *Forum Magnum*, Geta's name was replaced by additional titles of Caracalla, and his figure was cut away from a relief on the inside of the gate, in which he and his brother had been represented offering sacrifice. On the opposite side there is a similar scene, with a portrait figure of Severus, and on the exposed end of the gate a relief of Roman soldiers conducting oriental prisoners. Other smaller sacrificial scenes are represented under the large panels. The whole of this sculpture is very poor both in design and execution.[2] The gate is of white marble, except its lower part, which is of travertine.

[1] An extraordinary instance exists of the strictness of Caracalla's orders for the obliteration of Geta's name. A lead pipe in the Museo Kircheriano, found at Palestrina, has the following inscription—

EX · INDVLGENTIA · D · N · SEVERI
ANTONINI · ET · [GETE] AVGG · L · F

on which the name of Geta has been erased. This may have been done, as the Comm. Lanciani suggests (*Comm. di Frontino*, p. 269), on the occasion of repairs being made ; or possibly it was a pipe which the plumber had in stock from the time of Severus's lifetime till the murder of Geta, an interval of less than a year.

[2] The second half of the second century A.D. was a time of the most rapid decline in art ; the relief of Antinous in the Villa Albani, and other portraits of him made in the reign of Hadrian (117–138) are among the most beautiful existing specimens of Roman or Græco-Roman sculpture, while, after the accession of Sept. Severus in 193, no sculpture of any real artistic merit seems to have been produced.

The twelfth century campanile of S. Giorgio in Velabro stands partly on one end of this gate, and conceals two of its sculptured faces. See *Bull. Inst.* 1867, p. 217, and 1871, p. 233. Close by it stands one of those fourway arches, set at the intersection of two streets, which were called arches of *Janus Quadrifons;* it is partly built of older architectural fragments, and is a work of the most degraded period, probably later than the time of Constantine.

The reliefs with which the *Arch of Constantine* is decorated are described at pp. 278 to 281. This arch was erected to commemorate Constantine's victory over Maxentius at the Pons Milvius, A.D. 312; and this battle is represented on the sculptured band over the right-hand side arch, on the front away from the Colosseum.

The general design and proportion of this arch are exceedingly good, and are probably partly copied from the Arch of Trajan; from which are also taken not only the fine sculptured panels with scenes in the life of Trajan, but also the main entablature, and the eight magnificent fluted columns of the Corinthian order which decorated the two fronts of the arch. These are large monoliths of Numidian *giallo antico;* one is now replaced by a white marble column, the original one having been placed in the Lateran Church, where it still exists. The clumsily sculptured Victories in the spandrels of the central arch, the river-gods over the side arches, the medallions of the rising and setting sun at the ends, the Victories on the pedestals of the *giallo* columns, and the bands over the side arches, are all of Constantine's time, and show the miserably degraded state into which Roman art had sunk by the beginning of the fourth century.

A long inscription is cut in the centre of the attic, but no exact indication of the date is given in it. The words SIC · X—SIC · XX, show that the arch was erected after the tenth year of Constantine's reign (A.D. 315), the meaning is—"*as he has reigned ten years, so may he reign twenty.*" The

title *Maximus*, which is used in the main inscription, occurs only on coins of Constantine which were struck after his tenth year; and the phrase *by divine inspiration* (*instinctu divinitatis*), appears also to point to a time when Constantine was more under Christian influence than he was in the early years of his reign.[1]

A staircase formed in the thickness of the arch is entered from a door some height above the ground, in the end towards the Palatine.

The Arch of Dolabella is probably not a triumphal arch, and its original use is not known. It stands on the Cœlian hill, and the continuation of the Claudian aqueduct which Nero built passes over it, branching in two directions; it partly conceals one of the piers of Dolabella's arch. It is a quite plain archway, built of large blocks of travertine, and on it is an incised inscription recording that it was erected by order of the Senate by the Consuls Publius Cornelius Dolabella and C. Junius Silanus, *i.e.* in the year A.D. 10. The latter, as the inscription records, was *Flamen Martialis*, and it has been suggested that this gateway led into the *Campus Martialis*, an open space on the Cœlian hill, which was used for games in honour of Mars at times when the great *Campus Martius* was inundated.

The arch, wrongly called that of Drusus, is mentioned at p. 365.

The Arch of Gallienus was built close against the outside of the *Porta Esquilina*, in the Servian agger (see p. 66). It was originally a triple arch with a central pediment, and is shown so in the Mantuan picture (see De Rossi, *Piante di Roma*, etc. 1879, and Bellori, *Vet. Arc.* xxii.); the two side arches and the pediment were removed in the sixteenth century.

On each side of the existing arch there is a Corinthian pilaster which supports the entablature, the frieze of which is

[1] It, however, seems probable, from some existing marks on the marble, that these words were added in place of some earlier phrase.

incised with a laudatory inscription recording its erection in A.D. 262, by the Prefect of the city, M. Aurelius Victor, in honour of Gallienus and his wife Salonina. The whole is built of massive blocks of travertine.

Several of the triumphal arches of Rome which are now destroyed are illustrated by Bellori, *Veteres Arcus*, Rome, 1590; see also Fea, *Archi triumph.* Rome, 1832.

One of the earliest honorary columns erected in Rome is that shown on the reverse of a denarius struck about 130 B.C. with the legend C · AVG*urinus;* the column is surmounted by a statue, and two bells hang from its capital; at the sides stand an augur with the *lituus*, and another figure bearing a patera and a loaf of bread. This appears to be a column erected outside the *Porta Trigemina*, in honour of L. Minucius, in 439 B.C., on account of his reducing the price of bread. Livy iv. 16) does not mention the column, but says that a gilt (bronze) statue of an ox was set up in honour of this good deed.

Other early columns called *Duilia* and *Mœniana* were set up in the *Forum Magnum;* that erected in honour of Julius Cæsar is mentioned at p. 179. Trajan's column is described at p. 274.

The Column of Antoninus Pius stood in front of the *Temple of Antoninus Pius* (on Monte Citorio), the remains of which are wholly buried. The pedestal of the column remained *in situ* till it was set by Benedict XIV. near the obelisk in the Piazza di Mte. Citorio. Gregory XVI. moved it to the Giardino della Pigna, in the Vatican, where it still stands. The column itself, which was a monolith of red granite, had been overthrown and broken into many pieces. Its fragments were discovered under a house at the N.W. angle of the Piazza in 1704, and were cut up to mend the obelisk of Mt. Citorio. On the base of this column was an interesting quarry inscription, recording that two blocks of granite, 50 feet long, were sent from Egypt by Dioskouros and Aristides the architect, in the ninth year of

Trajan's reign (A.D. 106). This fragment is preserved in the Vatican Museum. The inscription runs—

ΔΙΟCΚΟΥΡΟΥ
ΛΘ · ΤΡΑΙΑΝΟΥ
ΔΥΟ · ΑΝΑ · ΠΟΔΕC · Ν.
ΑΡΙCΤΕΙΔΟΥ · ΑΡΧΙΤΕΚΤΟΥ.

The ΛΘ means *the year nine*, Λ or L being probably some ancient Egyptian symbol meaning year, adopted under the Empire instead of the proper Greek form ΕΤΟΥΣ. The Ν is the Greek numeral 50. The ΠΟΔΕC is a blunder for ΠΟΔΑC.

This column was not erected till after the death of Antoninus Pius in A.D. 161; the inscription on the pedestal records that it was set up by his adopted sons, M. Aurelius Antoninus and Lucius Verus—DIVO · ANTONINO · AVGVSTO · PIO—ANTONINVS · AVGVSTVS · ET—VERVS · AVGVSTVS · FILII.

On one side of the pedestal are very high reliefs of soldiers, both cavalry and infantry, arranged in a very tasteless way, in three tiers one above another. The other relief is very superior as a work of art; it represents the apotheosis of Antoninus Pius and Faustina; see p. 421. A youth reclining on the ground and holding a tall obelisk represents the *Campus Martius;* on the other side of the relief is a fine seated figure of *Roma.* On the summit of the column stood a colossal statue of Antoninus in gilt bronze.

With the exception of its pedestal and the statue at the top, the Column of Marcus Aurelius is still well preserved. It is almost a copy of Trajan's column, and, not counting the pedestal, is exactly the same height—100 Roman feet, or 97 feet 6 inches English measure, whence these were called *columnæ centenariæ.*[1] The pedestal was in two stages, one of which is

[1] Cf. the ancient name of the Parthenon, called *Hecatompedon* from its being 100 feet long.

now buried below the modern piazza, which is about 16 feet above the old level. On the upper part of the lower stage was a sculptured band, with reliefs of Victories holding garlands; these are shown by Du Perac, *Vestigj di Roma*, and by other sixteenth-century antiquaries. The upper stage of the pedestal has been completely renewed. On the top of the column was a colossal statue of M. Aurelius in gilt bronze. Like the column of Trajan it stood in front of a temple dedicated to the deified Emperor,[1] and was surrounded by a large *peribolus* or enclosure with rows of columns; see *Ann. Inst.* 1852, p. 338, and *Mon. Inst.* v. Tav. 40. The column is built of Luna marble, and has an internal winding staircase. It had a special custodian, and a decree of the Emperor Sept. Severus granting him a house (*solarium*[2]) to live in still exists incised on marble, and is preserved in the Galleria lapidaria of the Vatican. This inscription is long and contains many interesting details relating to the site and materials of the custodian's house. The spiral reliefs, which wind round the column in 20 tiers, represent scenes in the four campaigns of Marcus Aurelius against the German tribes north of the Danube, A.D. 167–179. In both design and workmanship these sculptures show a considerable decadence since the time when Trajan's column was executed.

For an account of this and the column of Antoninus, see Bartoli, *Columna M. Aurelii*, Rome, 1704; Chausse, *Colonna trovata nel Campo Marzo*, Naples, 1704; Fabris, *Piedestallo della Colonna Antonina*, Rome, 1846; Pellegrini, *Colonne ed obelischi*, Rome, 1881.

[1] The elevation called Monte Citorio is probably formed by the buried remains of the Temple of Marcus Aurelius.

[2] The word *solarium*, which originally meant an upper room exposed to the sun, in this inscription appears to be used for a whole house. Cf. the mediæval English *solar*, an upper room usually at the dais end of the hall.

CHAPTER XIV.

THE WATER SUPPLY OF ROME.

TILL the year B.C. 312, when the Censor, Appius Claudius Cæcus, constructed the first aqueduct—the *Aqua Appia*—the Romans were dependent for their water supply on the Tiber, or on wells and springs. Frontinus, in his valuable work, *De aquæductibus Urbis Romæ*, Art. iv., says—"*Ab urbe condita per annos CCCCXLI* (till B.C. 312) *contenti fuerunt Romani usu aquarum quas aut ex Tiberi, aut ex puteis, aut ex fontibus hauriebant.*" This book, to which we owe the greater part of our knowledge of the details of the water supply of Rome, and the laws which regulated it, was written by Sextus Julius Frontinus, who was Prætor Urbanus in A.D. 70, Governor of Britain (under Vespasian) in A.D. 75, when he conquered the Silures, and in the reigns of Nerva and Trajan, A.D. 97 to 106, occupied the very important post of *Curator Aquarum*, or general Superintendent of all the aqueducts, reservoirs, and fountains, used for the public and private water supply of Rome; he was also Consul Suffectus in A.D. 97, and Consul in A.D. 100. His work, together with much new and valuable information about the aqueducts, has been edited by the Comm. Lanciani, *I comentarii di Frontino*, Rome, 1880.

Some of the early rock-cut cisterns for storing spring water, and the well-shafts which communicate with them, still exist on the Palatine Hill, and are mentioned in Chapter III., see pages 90 and 49 and fig. 4. Other springs of water, such as the sacred *Fons Juturnæ* in the Forum (see page 178), were

preserved in later times for ornamental and religious reasons, but a large proportion of the small streams which once formed open brooks, draining the main valleys of Rome, were, after the wide growth of the city, and the construction of the aqueducts, no longer allowed to run along the surface of the ground, but were turned into the great *Cloacæ*, which they helped to keep clean and wholesome, just as in London is the case with the Fleet and other once clear streams of water.

The earlier aqueducts were not constructed on the lofty tiers of arches which afterwards were built to supply the upper stories of the lofty buildings of imperial Rome, but ran for the most part at the level of the valleys, in subterranean channels. The first aqueduct, the *Aqua Appia*, was almost wholly underground; the second, the *Anio Vetus*, the channel of which was 43 miles long, ran only for about a quarter of a mile above the ground.

The Romans were thoroughly acquainted with the simple hydraulic law that water in a closed pipe finds its own level, or, as Pliny puts it,—*subit altitudinem exortus sui* (*Hist. Nat.* xxxi. 6), and they took advantage of this fact by constructing pipes reaching to the top of lofty fountains, and "rising mains" to supply the upper rooms of houses, which branched off right and left from a main-pipe laid under the pavement of the streets.

It was not, therefore, from ignorance of this law of Nature that they constructed water-channels borne on long lines of arches, but simply because it was the most economical way to bring a large supply of water from a distance. Even in recent times, this method has been resorted to with advantage,[1] in spite of the modern improvements in iron casting, which allow iron pipes to be made of great strength and capacity; whereas the Roman pipes had to be made of the more costly and weaker lead, or, in places of especial pressure, of the still more expensive bronze.

[1] As in the great Croton Aqueduct, 40 miles long, which supplies New York city; constructed between 1837 and 1842.

The calcareous deposit with which water from the neighbourhood of Rome so rapidly encrusts pipes and water-channels made it doubly convenient to employ channels which were always readily accessible, and could be cleared out without any difficulty.[1]

One peculiarity in the construction of the Roman aqueducts is very difficult to account for, and that is the very circuitous course which some of them follow, in some cases about doubling the distance in a straight line. This, according to Frontinus, was to prevent the slope of the channel from being too steep, when the source of the water was high above the required level of distribution in Rome; but it is not easy to say why step-like falls of water could not have been arranged for at any required points along the course of the aqueduct. The gradient (*libramentum*) recommended by Vitruvius (viii. 6) is 6 inches in each 100 feet.

The following were the officials and workmen who had charge of the water supply of Rome.

Till the last century of the Republic the censors had charge of all aqueducts and *rivi subterranei;* see Livy, xxxix. 44; and then, for a short time they were under the quæstors and ædiles; this lasted till the reign of Augustus, who instituted a new and very complete system of management, directed by a *Curator Aquarum*, who was appointed for life. It was an office of great dignity, resembling in function that of a *Curator Viarum* or *Frumenti*. The first *Curator Aquarum* was M. Agrippa (Front. 98–99), who held the office till his death in 12 B.C. The *Curator* was surrounded by a number of minor officials and personal attendants (*apparetores*), such as secretaries (*scribæ librarii*); ushers (*accensi*); criers (*præcones*); three public slaves; several engineers (*architecti*); and, when

[1] The modern water companies of Rome constantly find their pipes almost closed up in a very short time after they are laid. In the old system the water had deposited the greater part of its dissolved carbonate of lime before reaching the lead-pipes of distribution in the city.

outside the walls of Rome, two lictors. Other subordinate officials were the two *Adjutores*, men of Senatorial rank, one *Procurator Aquarum*, usually an Imperial Freedman, and a *Tribunus Aquarum*. The artisans who worked under the *Curator* were classed as belonging to the *Familia aquaria publica* and *Familia aquaria Cæsaris;* these included *Aquarii* or *Villici*, presided over by a *Præpositus*, who made and laid the lead supply-pipes; *Libratores*, who measured the levels of the water; *Castellarii*, who kept the *Castella* or reservoirs in order; *Circitores*, inspectors of the works; *Silicarii*, who took up and relaid the *silex* (lava) pavement of the street, when mains were laid or repaired; *Tectores* (tilers) and other workmen, such as bricklayers, masons, and crushers of pottery (*testæ tunsæ*), to make the *opus signinum* for lining the channels and reservoirs.[1]

The public office of the *Curator* was called the *Statio Aquarum*, and to it were attached clerks, called *Tabularii Stationis*.

The construction of new aqueducts was carried out by public contractors, *Redemptores operum publicorum*. Frontinus mentions the cost of some of the aqueducts, which seems extraordinarily small, but it must be remembered that they were built by slave labour, and that the materials used were chiefly state property, and were mostly found close at hand, and so cost but little for carriage. The *Aqua Claudia* and the *Anio Novus*, both begun by Caligula, and completed by Claudius in A.D. 50, are stated by Frontinus to have only cost $55\frac{1}{2}$ millions of sestertii, about £560,000. These are two of the longest and most lofty of the aqueducts, and were built of massive blocks of tufa.

A strip of land, 30 feet wide, was reserved all along the course of the channel or arches of all aqueducts, and no one was allowed, under penalty of a heavy fine, either to plant

[1] Immense quantities of this must have been used, and it appears probable that the great heap of broken pottery called Monte Testaccio was stacked for this purpose; see page 37.

trees or in any way encroach upon this reserved strip. The margin of this along three of the older aqueducts was marked with *cippi jugerales*, or boundary stones, set at intervals of 240 feet, marked with distances to show the length of the channel from its termination in Rome. These *cippi* appear to have been used only by the earlier Emperors; of the thirty-one which exist, twenty-six are of the time of Augustus, three of Tiberius, and two of Claudius.

The laws relating to water supply, *Jus ducendæ tuendæque Aquæ*, are given by Frontinus. From these it appears that Imperial concessions of water to individuals, *ex indulgentia* or *liberalitate Imperatoris*, were only granted for life, and were not enjoyed by the heirs, without a fresh concession. A list of penalties for various offences is given—namely, for irrigating land with public water; for throwing dirt into the water; for any encroachment on the 30 feet strip, for any injury to pipes or channels; for inserting a pipe larger than the concession allowed; for inserting a pipe into the *specus* of an aqueduct instead of the *castellum*—in the last two cases the concession was forfeited. It was also forbidden to use water from leaks (*aqua caduca*) without permission, in order to prevent leaky places being made by wilful injury. And heavy fines were inflicted on any official who connived at any of these misdemeanours.

In spite of the penalties, fraud appears to have been common, and the *aquarii* (plumbers) were often bribed to insert a larger pipe than had been conceded. In order to prevent this, the junction between a public main or reservoir (*castellum*) and the lead-pipe for a private supply (*erogatio*) was made with a pipe of bronze (*calix*), the exact capacity of which (*lumen*) was stamped on it—*est calix modulus æneus*, as Frontinus says; it was to be at least 12 *digiti* long (9 inches). The two existing specimens of *calices* are stamped with an owner's name, as well as the capacity; one is in the Vatican, another in the Museo Kircheriano.

Aqueducts are called *canales structiles* by Vitruvius (viii. 6),

who mentions two other methods of carrying water—namely, lead pipes, *fistulæ plumbeæ*, and clay pipes, *tubuli fictiles;* the latter were mainly used, as they are now, for agricultural purposes.

Vitruvius (viii. 1) gives a number of sensible suggestions as to the selection of water for drinking; cap. 2 is on the use of rain-water. The source was usually either an open spring (*fons*) or a well (*puteus*), and frequently several springs were conducted to one reservoir at the commencement of an aqueduct. At the fountain-head a large reservoir (*piscina*) was formed, which answered the purpose of a settling-tank; other reservoirs for the same purpose (*piscinæ limariæ*) were constructed at various points along the course of the aqueducts.

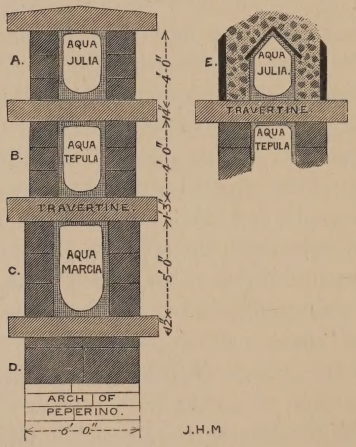

Fig. 52.

Section through one of the Arches of the Aqueduct.

A B C. Specus of the Aquæ Julia, Tepula, and Marcia; the top and bottom of each is of travertine, the sides of tufa or peperino; they are lined with Opus signinum.

D. Peperino arch.

E. Specus of the Aqua Julia at another point, where it has been restored in concrete and brick.

The channel along which the water flowed was called the

specus, and was always thickly lined with a very hard cement (*opus signinum*), made of lime, pozzolana, and pounded pottery or brick. Even the roof of the *specus* was lined with this, and at the bottom of the channel it was formed into a circular depression (see fig. 52). In the earlier aqueducts the *specus*, like the arches below, was built of large blocks of tufa, and when two or more *specus* came close one over another the intermediate floor was often formed by a large slab of travertine, so as not to waste space. This is the case where the three *specus* of the *Aqua Julia*, *Tepula*, and *Marcia*, rebuilt by Augustus, pass over the Porta San Lorenzo; see figs. 52 and 54.

In later times the aqueducts and their *specus* were made of concrete faced with brick on the outside; in some cases the roof of the *specus* was formed by two large tiles (*tegulæ bipedales*) set leaning together, acting as centering to support the mass of concrete which was poured in above—a method frequently employed in the smaller *Cloacæ*. Fig. 52 shows an example of this taken from a restoration of part of the *Aqua Tepula* near the aqueduct-arch of Augustus. At intervals of a few yards blow-holes were made for imprisoned air to escape, and also for ventilation when the water was temporarily cut off, and the workmen were passing along the *specus* to get at a place where repairs were needed. These apertures passed straight up through the top of the channel, or if there were another *specus* above, were carried out at the side.

At the termination of the aqueduct in the city a large reservoir was built called a *Castellum Aquarum*, from which the water was distributed over the quarter that it supplied. Vitruvius (viii. 6) says that it is to be divided into three mains, one to supply public fountains, basins, and jets (*fontes, lacus, et salientes*), one to supply public baths, and a third for private houses. In later times the arrangement was much more complicated, and in the time of Frontinus many other subdivisions of *Castella* existed—(1) For *Castra*, military camps; (2) *Opera publica*, places of amusement and public buildings generally, except those which

had been built by the emperors, which were classed (3) *Nomine Cæsaris;* (4) *Laci et Salientes*, public troughs, pools and jets of water; (5) *Munera*, large ornamental fountains; (6) *Beneficia Cæsaris;* Imperial grants of water to private persons. Under class (2) would come places such as the Baths of Agrippa and other public buildings constructed by citizens of Rome; class (3) included the *Colosseum*, the *Thermæ of Titus* and *Caracalla*, and all buildings constructed by the emperors. Some of the *Castella* were architecturally very magnificent, being lined with rich marbles, and decorated with statues and a large public fountain. That built by Severus Alexander as a *Castellum* for the *Aqua Julia* on the Esquiline, remains of which still exist in the modern Piazza Vittorio Emmanuele, was a large and splendid example, with a very complicated system of chambers for subdividing and filtering the water. It is shown with some minuteness on medallions of Severus Alexander, see Froehner, *Med. Rom.* p. 169. This appears, however, not to have been a *Castellum* for immediate distribution, but mainly a very large and elaborate fountain, the water from which, after being displayed in a series of cascades and jets, was run off from a lower basin to a number of less magnificent reservoirs, from which the water was distributed in lead pipes. It was excavated, and careful drawings of it were made by some Prix de Rome students in 1822. It was again and more completely exposed in 1877, and no lead pipes were found leading from it, as would have been the case if it had been an ordinary *Castellum* for the *Erogatio*.

The so-called "*trophies of Marius*," made in the reign of Domitian, were set on the exterior of this building, whence they were moved in the sixteenth century to the top of the Capitoline stairs; see p. 19, note. In addition to the large central *Castellum* each aqueduct had a number of smaller ones placed at various points in the *Regiones* it supplied; some, such as the *Aqua Marcia*, had over fifty of these subordinate *Castella*.

Important buildings had reservoirs of their own (*piscinæ*)

with a series of vaulted settling-chambers, usually arranged in two stories. Existing examples are the so-called *sette sale*, a reservoir built by Nero to supply his *Golden House*, see p. 352; and those which belonged to the *Thermæ* of Caracalla and Diocletian; see p. 373. The cisterns in private houses were called *castella domestica;* but except in very grand houses these appear not to have been much used, as the inhabitants of ancient Rome possessed the great advantage of having a constant water supply, and so had no need of storage.

Vitruvius (viii. 6) mentions two sorts of pipes in addition to the built *specus*—"*Ductus aquæ fiunt generibus tribus, rivis per canales structiles, aut fistulis plumbeis, seu tubulis fictilibus.*" Clay pipes were mostly used for agricultural purposes under the empire, and many examples of these have been found, but in earlier times they were occasionally used for drinking-water, in which case Vitruvius says the joints should be strengthened at points of special pressure by stone rings. Vitruvius recommends them in preference to lead pipes on account of the risk of lead poisoning, *quod ex eo* (*plumbo*) *cerussa nascitur*. In Rome, however, there was no risk of this, owing to the calcareous deposit with which they were rapidly lined, and therefore under the empire they were universally used, except in a few rare cases where pipes of bronze were introduced in places where there was heavy hydraulic pressure. Pliny mentions wooden pipes, made of elm or fir; no examples of these have been found in Rome, but there is no doubt that they would last a long while,[1] as wood which is kept constantly wet does not decay as it does if sometimes wet and sometimes dry. Stone pipes were used at a very early period, and many examples of these have been found in various parts of Italy;

[1] A few years ago, wooden pipes, laid by the New River Company, and probably two centuries old, were taken up in some of the streets of London in good preservation. Similar wooden pipes, made of a tree with its centre drilled out, have been found in the monastic buildings of Westminster Abbey. These were made of willow wood.

some from Arezzo, of the Republican period, are very large, nearly two feet in internal diameter.

Lead pipes (see fig. 53) were made by rolling thick plates in lengths of 10 feet, round a wooden core, the edges were brought together and soldered with melted lead, *in rotundationem flectantur* (*laminæ*), as Vitruvius says; see D, on fig. 53.

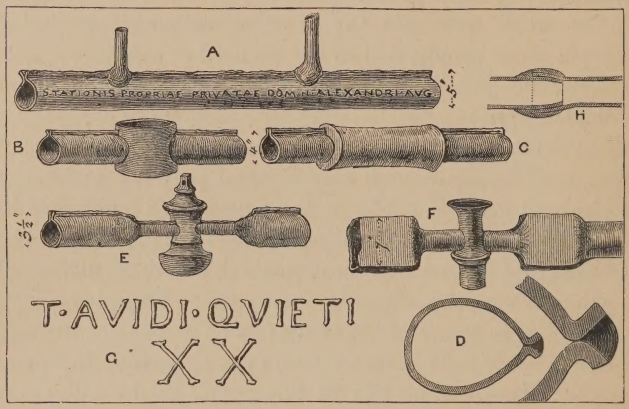

Fig. 53.

Lead Pipes and Turncocks.

A. Main-pipe with two service branch pipes, inscribed with the name of Severus Alexander.
B. Fourway pipe.
C. Junction formed by enlarged lead cylinder.
D. Section of pipe and soldered joint to larger scale.
E, F. Stopcocks, *Epistomia Adplumbata.*
G. Owner's name and capacity of pipe (20 *quinariæ*) inscribed in raised letters.
H. Method of joining two lengths of pipe.

The pipes were made of much thicker lead than is the custom now. Some, which are 5 inches in diameter, are made of lead weighing more than 20 lbs. to the square foot.

The lead plates were probably cast, as is done now, on a smooth bed of sand, in pieces 10 feet long, and then cut up

into strips of the right width to roll into pipes; *Fistulæ ne minus longæ pedum denum fundantur*, Vitr. viii. 6. Inscriptions were cut in relief on stamps of wood or marble, and then impressed on the sand, so that the cast plate received it in relief; pipes were joined endwise, by one end being enlarged by hammering, and the end of the next pipe reduced in size so as to slip into the larger one; see H, on fig. 53.

The taps and turncocks by which the water could be shut off from the main during repairs were made of bronze, soldered to the lead pipes—*epistomia fistulis adplumbata*, as Ulpian calls them; see E, F, on fig. 53. A very large one found at Pompeii still is half full of water, which can be heard to splash when it is moved.

Pipes of different capacity had different names, such as *quinaria*, *senaria*, *septenaria*, etc. According to Vitruvius (viii. 6), they were named from the width of the plate before it was rolled into a tube, *e.g. fistula quinquagenaria*, from its plate being fifty *digiti*[1] wide (3 feet $\frac{1}{8}$ inch); but Frontinus, who mentions this statement of Vitruvius, thinks it more probable that the names came from the size of the diameter of the finished pipe, *e.g.* that a *fistula quinaria* was so-called *a diametro quinque quadrantum*. The capacity of pipes was measured in so many *quinariæ*; the ten *quinariæ* pipe measured about $1\frac{7}{8}$ inch in internal diameter at the widest part of the irregular or pear-shaped oval—a form produced by the careless way the pipes seem to have been rolled round the wooden core. The twenty *quinariæ* pipe measures about $2\frac{5}{8}$ inch, and the other sizes in proportion.

The importance of inscriptions on lead pipes has only been realised within the last few years, mainly owing to the care of Comm. Lanciani, who with wonderful industry has collected an immense number and published them in his valuable *Comentarii di Frontino*.

[1] The Roman *pedes* or foot, which was a fraction smaller than the English foot, contained sixteen *digiti* or twelve *unciæ*.

Whole tons weight of these interesting documents (as inscribed pipes may be called) have been melted down without any note being taken of their inscriptions; even as late as 1878, Prince Alessandro Torlonia melted over 2000 lbs. weight of inscribed pipes, which were dug up in his estate in Rome, and the few that it has been thought worth while to put in museums, are usually scattered and hidden away, so as to be inaccessible.

With the aid of these Comm. Lanciani has identified the site of eighty-one houses in Rome from the owner's name being inscribed on the pipes, and also eighty-eight suburban estates or villas, as well as much information as to the distribution of water from the various *Castella*, and many collateral historical and topographical facts.

The earliest existing inscriptions date from the reign of Augustus and continue till the fourth century; they are most numerous in the reigns of Domitian, Nerva, Trajan, Severus, and Caracalla; after Decius the number steadily declines. These inscriptions record a large number of facts, such as the name of the reigning emperor, and sometimes the consuls for the year, the *Procurator Aquarum*, and other officials under the *Curator*, the plumber who made the pipe, the owner of the house, the name of the house or estate, the fact of the water being an imperial concession; and many have numerals, showing the capacity of the pipe in numbers of *quinariæ*.

A few pipes are recorded by Gruter and others to have been inscribed with the name of the water they carried, but these are probably spurious, with perhaps the exception of one of about the year 366, with the inscription AQVA · PINCIANA · D · N · (*Domini Nostri*) VALETINIANI · AVG. This pipe was found in 1757, in the *Horti Sallustiani*.

The list of emperors' names on pipe inscriptions includes nearly all from the reign of Augustus down to Valentinianus II., A.D. 375, when the series closes; see fig. 53 A. Several pipes inscribed with the name of Pope John I., 523–526, were

found in 1707, near S. Lorenzo fuori le mura, but this is almost an isolated example; the inscription was SALVO · PAPA · IOHANNE · STFAN · PR · (*Stefanus Præpositor*) REPARAVIT ·

The earlier examples have the name of the emperor only, as for example TIB · CAESAR · AVG (Tiberius) or NERONIS · CAESARIS · AVG (Nero). Another from the *Thermæ of Nero*, near the Pantheon, has the Procurator's name in addition, SVB · GNESIO · AVG · LIBERTO · PROC · NERONIS · CLAVDI · CAES · AVG. The Greek name Γνησίος occurs in many of these inscriptions. One of Vespasian has on it the name of the water-works office in Rome—IMP · AVG · VESPASIANI · STATIO · VRBANA · AVG.

The commonest formula on pipes of the latter part of the first and the second century gives the emperor's name, then the procurator's, and last the plumber's, *e.g.* IMP · CAES · TRAIAN · HADRIANI · AVG · SVB · CVRA · HYLAE · AVG · LIB · PROC · A · LARCIVS · EVTYCHES · FEC · *i.e.* "*in the reign of Hadrian, under the care of the Procurator Hylas, a freedman of Augustus, A. L. Eutyches made it.*"

In a few cases the exact year is indicated by the number of the emperor's consulship—*e.g.* IMP · DOMIT · AVG · GERM · XVI · COS (A.D. 93), or by the names of the two consuls for the year, *e.g.* PISONE · ET · IVLIANO · COS (A.D. 175), TESSERA · CASTRE[N]SIS; this interesting inscription was found in the Prætorian Camp in 1862.[1]

A pipe found at Ostia in 1867 has the names of Severus and his two sons Caracalla and Geta—IMPP · L · SEPTIMI. SEVERI · ET · M · AVR · ANTONINI · AVGG · ET · GETAE. CAESAR. SVB · CVRA · PROC · VENVST · AVGG · LIBERT · EX · OFF · T · FLAVI · TIRIDATIS · LIB. *i.e.* "*in the*

[1] The *tessera* was the watchward for the night written on a slip of wood, and sent round the camp before dark; see Livy, xxvii. 46. Its meaning inscribed on a pipe is not clear; it may simply mean *stamp of the Prætorian Camp.*

time of the two Augusti Severus and Caracalla[1] *and of the Cæsar Geta, under the care of the Procurator Venustus, an imperial freedman; out of the workshop of the freedman T. Flavius Tiridates.*" Imperial concessions of water are recorded by the words EX · INDVLGENTIA or EX · LIBERALITATE, followed by the Emperor's name (see p. 455).

Names of Empresses also occur, *e.g.* PLOTINAE . AVG, on a pipe found near the Emporium, and MATIDIAE · AVG*usti Filiæ* Q · PVBLI · SECVNDVS · FEC*it*—"(*Temple*) *of Matidia the daughter of Augustus, Q. P. Secundus made it.*"

Other officials' names, instead of the *Procurator Aquarum*, sometimes occur, such as the *Tribunus Aquarum*, and the *Scribæ* or secretaries of the Curator, but these varieties are rare. The chief official of all, the *Curator*, did not impress his name on the pipes, except in the case of those in his own private house; see below.

Plumbers' names are given either in the nominative with FECIT, or in the genitive after EX · OFFICINA, examples of which are given above. A considerable number of female plumbers' names occur, *e.g.* IVLIA · CLEOPATRA · FECIT, and FLAVIA · GLYCERA · FECIT.

The names of private owners are very numerous—several names often occur on one pipe, *e.g.* M · POSTVMI · FESTI · ET · PAVLLAE · EIVS · ET · FILIORVM · ET · POMPEI · HELIODORI—"*Marcus Postumus Festus and Paulla his wife and his sons, and Pompeius Heliodorus.*"

A pipe recently found on the Esquiline has M · COCCEI · NER[VAE]; M. Cocceius Nerva was *Curator Aquarum* from A.D. 24–33, but his name is here inscribed in his private capacity of a consumer of water. He was Consul-Suffectus in A.D. 22, and his name is inscribed on the front of the "Mamertine prison" as one of its restorers; see p. 80. M. C. Nerva was an intimate friend of Tiberius, and in A.D. 33 committed suicide from grief at the cruelties and murders committed by the Emperor.

[1] Caracalla is usually called Marcus Aurelius Antoninus.

On some pipes is recorded the fact that the imperial concession of water was renewed to a man's heirs, *e.g.* HEREDVM · SPVRII · MAXIMI · EGREGII · VIRI.

The names of lady house-owners are common, as, for example, CORNELIAE · PRAETEXTATAE · *Caii Filiæ:* and SEPTIMIAE · CALLICRATIAE; and JVLIAE · CALICES · ET · LIBERT · EIVS · ET · ALYPTI · AVG · L · LIBERT.; that is, the right to the water was shared by "*Julia Calice, her freedman, and Alyptus an Imperial freedman.*"

Topographical indications, such as names of estates, sometimes occur but are rare. A pipe from the Palatine has [DOM]VS · AVGVSTANAE. Some marked as belonging to Sallust's estate are mentioned at p. 406.

Donati, *Roma*, p. 400, and other old topographers, mention a pipe found near the Pantheon, which was marked *Temple of Matidia* — TEMPLO · MATIDIAE; but this inscription is suspicious, from the word *templo* instead of the nominative being used.

A pipe of the sixth century, in the Museo Kircheriano, has ✠ XENOD · ORFANONT. A Xenodochium or Asylum for orphans, possibly that which Belisarius is recorded to have built.

Several pipes have been found in the Prætorian Camp inscribed CASTR(A) PRAETOR(IA); see also p. 463.

In the same place was found the following interesting inscription on a pipe which is now in the Museo Kircheriano— IMP · L · SEVERO · III · ET · ANTONINO · COS · (A.D. 202) CVRA · GEN · FVRIO · FESTO · TR . . . CoHORtis · VII · PRæpositus · OPERum MINorum CVRator · MESSIO · ATTICO · CHOR · VII · PR.

These include nearly all the known examples of Roman pipes inscribed with the name of the building to which they belonged.

The capacity (*lumen*) of the tube is sometimes, but not often, inscribed on it in large numerals, giving the number of

quinariæ; see fig. 53. The smallest existing specimen is marked III., and the largest pipes reach to over CCC *quinariæ.*

In the time of Frontinus, *Curator Aquarum* from A.D. 97 to 106, there were nine aqueducts to supply Rome.

I. *The Aqua Appia*, built at the same time as the *Via Appia*, by the Censor Appius Claudius Cæcus, 313 B.C., whose Censorship was prolonged to allow him to complete the work, Liv. ix. 29; Diod. Sic. xx. 36. The start of the water-channel is mentioned by Frontinus as being by the *Via Prænestina*, between the seventh and eighth milestone, measured from the *Porta Esquilina.*

This appears to be a mistake, as the real source has been discovered in the reservoirs formed in the ancient quarries, now called *latomie della Rustica*, about 50 feet below the level of the ground. Lanciani suggests the probable emendation *Via Collatina* instead of *Prænestina.*

The subterranean *specus* of this aqueduct has been at various times discovered in several places in Rome; at one point it is now accessible, and is well preserved for a long distance, namely, where it passes through the old tufa quarries in the Aventine near the Church of S. Saba; its line near this point is now traversed by the modern Via di Porta; see Descemet, *Fouilles a S. Sabina*, Paris, 1863.

The termination of the *Aqua Appia* was near the river bank, close by the *Marmoratum;* the last part of its course was on arches close inside the line of the Servian wall; the rest was subterranean. Additional springs were brought to the *Aqua Appia* by a branch added by Augustus, which was called the *Aqua Appia Augusta.*

II. *The Anio Vetus* was begun in 272 B.C., forty years later than the *Appia*, by the Censor Manius Curius Dentatus out of the spoils won from Pyrrhus, and in 270 B.C. was completed by M. Fulvius Flaccus, who had been appointed, together with Dentatus, *duumvir aquæ perducendæ.* Its length was 43 miles;

10[1] from its source in the hills above Tivoli, and 33 thence to Rome, its course being very circuitous; see Aur. Victor, *Viri ill.* 43.

The *specus* of the *Anio Vetus* has been identified below the Claudian Aqueduct at the Porta Maggiore; other pieces of the channel and remains of large cisterns were discovered in 1783–9, while laying out the new Via Principe Amadeo, Carlo Alberto, and Napoleone III.

A long piece of the *specus* was formed in the earth of the agger of Servius, and ran parallel to the wall. Where the *specus* was above ground, it was built of massive blocks of peperino; see Lanciani, *Com. di Front.*; Tav. iv.

A branch subdividing the water into two parts was built by Augustus, starting from the old *specus* about 2 miles from its termination in Rome, then passing by the *Amphitheatrum Castrense*, and for some distance along the line of the Aurelian wall towards the *Porta Latina*. The existing remains of this branch are of concrete faced with *opus reticulatum*.

III. *The Aqua Marcia*, built by the Prætor Q. Marcius Rex, in 144 B.C., by order of the Senate, at the same time that they had the two existing ones restored; Dion Cass. xlix. 42, and Pliny, H. N. xxxi. 3. This is commemorated on a *denarius* of the *Gens Marcia* with (*Obverse*) a head of King Ancus Martius and the *legend* ANCVS; (*Reverse*) a rude representation of the arches of an aqueduct inscribed AQVA MAR*cia*; on it is an equestrian statue—*legend*, PHILLIPVS. The supposed descent of the Gens from Ancus Martius, and the construction of the Marcian Aqueduct, were the two chief distinctions of the family, and were therefore commemorated on their *denarii*.

The source of the aqueduct is about 38 miles from Rome; its last 6 miles are on massive peperino arches, many of which are still well preserved. The water was brought into Rome at a level high enough to supply the Capitoline *Arx*. A short branch, called the *Aqua Augusta*, was added by Augustus, and

[1] Not 20, as is sometimes stated.

this doubled the original supply of water, as is recorded in the Ancyræan inscription—AQVAM · QVAE · MARCIA · APPELLATVR · DVPLICAVI · FONTE · NOVO · IN · RIVVM · EIVS · INMISSO. Its water is exceptionally pure and cold—"*nives et frigora ducens Marcia*," as Statius calls it; *Sylv.* I. v. 25.

One of the *Cippi jugerales*, set up by Augustus to mark the band of ground, 30 feet wide, belonging to this aqueduct, has been found; it is inscribed—MAR(*cia*) IMP · CAESAR · DIVI · F · AVGVSTVS · EX · S · C · ∞CXCVII · P(*edes*) CCL—*i.e.* "*Marcian* (*Aqueduct*), *the Imperator Augustus*, (*adopted*) *son of the divine Cæsar, by command of the Senate; Cippus Number 1197, distance from the end 250 feet;* ⊥ for 50, the archaic form of L, is used here.[1] This interesting inscription is now built into a wall over the place where it was found.

The Marcian Aqueduct ended near the *Porta Capena* and was distributed over Regio II., the Cœlian Hill. Its *specus* can be well examined where it passes over the arch built by Augustus (now the Porta S. Lorenzo), below the *specus* of the *Aqua Julia* and *Tepula;* see fig. 54. At this point, where the aqueduct spanned an ancient road, the whole is of travertine; at other places peperino and tufa blocks were used. Some of the piers of this triple aqueduct were destroyed in 1884; see page 419. The Marcian water is still brought to Rome under the name of the *Aqua Pia*, a restoration completed in 1870.

IV. *The Aqua Tepula* was constructed by the Censors Cn. Servilius Cæpio and L. Cassius Longinus, in 127 B.C. It began about a mile and a half from the tenth milestone on the *Via Latina.* Its *specus* is shown on figure between the *Aqua Marcia* and *Julia.* This water was called *Tepula*, a form of *tepida*, from its being slightly warm.

V. *The Aqua Julia.* This and the two last mentioned aqueducts were for a long distance carried on the same row of

[1] The Roman numeral for 50 passed through three stages, first ↓, as on the earliest gold sixty-sestertii pieces, about 217 B.C., then ⊥, and lastly L.

arches, which were rebuilt in the reign of Augustus in 33 B.C. This new aqueduct, with the addition of the *Aqua Julia*, was

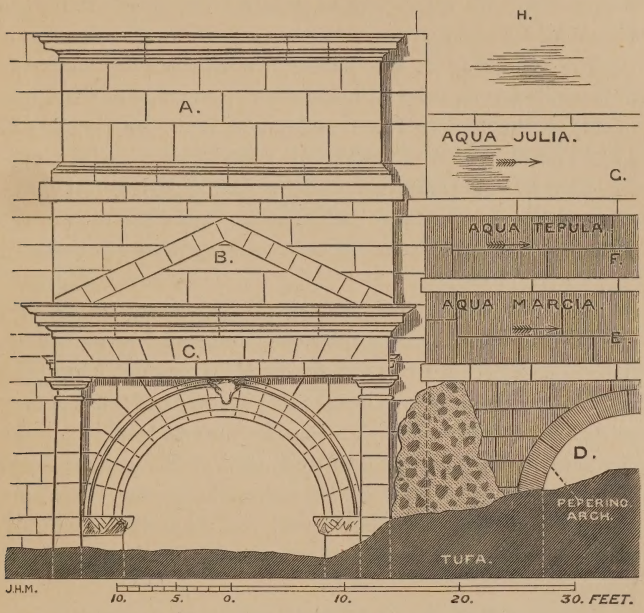

Fig. 54.

Arch built by Augustus where a triple Aqueduct passes over a Road—now the Porta S. Lorenzo.

A. Original inscription of Augustus.
B. Inscription recording restorations by Titus; the moulding of the pediment has been cut away to make room for this.
C. Inscription added by Caracalla; the architrave moulding has been cut away.
D. Peperine arch of the Aqueduct.
E, F, G. Specus of the Aquæ Marcia, Tepula, and Julia, now exposed by the removal of their sides.
H. Part of one of the towers of Aurelian's wall.

constructed by M. Agrippa when ædile; its source was near the twelfth milestone of the *Via Latina*. Frontinus (cap. 19)

says its level was the third in order, coming after the *Anio Novus*, which was the highest, and the *Aqua Claudia*, which was the second. Its *specus* is shown in fig. 52, above the *Aqua Tepula* and *Marcia*.

The rebuilding of this part of the aqueduct by Augustus in 5 B.C. is recorded by an inscription on the side of the upper *specus* (A, in fig. 54 *Aqua Julia*)—IMP · CAESAR · DIVI · IVLI · AVGVSTVS · PONTIFEX · MAXIMVS · COS · XII · TRIBVNIC · POTESTAT · XIX · IMP . XIIII · RIVOS . AQVARVM · OMNIVM · REFECIT; and below, on the frieze, another inscription records a restoration by Titus in A.D. 79 (B, in fig. 54).

Other restorations were carried out by Severus in A.D. 196, and Caracalla in A.D. 212; the latter is recorded by an inscription, to make room for which the moulded pediment has been cut away (C, in fig. 54). On the inner keystone of this fine arch an ox's head is carved, on the outside an ox's scull. All the moulded details, the cornice and caps of the columns and pilasters are very finely designed and well executed. Not only has the pediment been cut away, but even the mouldings of the architrave were hacked off to make room for Titus's inscription.

In Rome itself the three *specus* were separated and carried in different directions. Ruins of the once magnificent *Castellum* of the *Aqua Julia*, built by Severus Alexander, exist in the modern Piazza Vitt. Emmanuele; see page 458.

VI. *The Aqua Virgo;* this aqueduct also was constructed by Agrippa, while ædile in 33 B.C. Dion Cass. liv. 11; and Pliny, H. N. xxxi. 3. In the same year Agrippa, who was appointed by Augustus to the newly-instituted office of *Curator Aquarum*, is recorded (Pliny, H. N. xxxvi. 24) to have constructed for public use no less than 700 basins or pools (*Lacus*), 500 fountains (*Salientes*), and 130 *Castella*, many of them richly decorated with statues and columns; 300 statues of marble and bronze, and 400 marble columns were used in these

works, all of which Pliny says were erected in one year, 33 B.C., which was certainly not the case.

The main object of the *Aqua Virgo* aqueduct was to supply the *Thermæ of Agrippa;* its source, as Frontinus says, was near the eighth milestone of the *Via Collatina*, fed by a spring, which, according to the story, was first pointed out by a girl to some thirsty soldiers, and was therefore called the *Aqua Virgo.* This aqueduct has been restored, and still brings a large quantity of pure cool water to Rome, supplying the Trevi fountain, and those in the Piazza di Spagna and the Piazza Navona, together with ten smaller ones, and a large number of streets.

A well-preserved piece of the ancient *specus* can be seen below the level of the street, in the court of No. 12 *Via del Nazzareno*, behind the Trevi fountain. The arches themselves, which are of peperino, are buried, but the *specus* of massive travertine, decorated with an entablature, is visible, and is perfectly preserved. On both sides of the frieze is an inscription recording that this part was rebuilt by Claudius in A.D. 52, after the aqueduct had been injured by Caligula, probably while constructing his wooden amphitheatre near the *Septa Julia;* Suet. *Cal.* 21.

The inscription runs thus—TI · CLAVDIVS · DRVSI · F · CAESAR · AVGVSTVS · GERMANICVS · PONTIFEX · MAXIM · TRIB · POTEST · V̄ · IMP · XI̅ · P · P · COS · DESIG · IIII̅ · ARCVS · DVCTVS · AQVAE · VIRGINIS · DISTVRBATOS · PER · C · CAESAREM · A · FVNDAMENTIS · NOVOS · FECIT · AC · RESTITVIT. The special ornamentation of this piece of the aqueduct is due to its being a part where a road passed under it, as is the case with portions of other aqueducts at the *Porta Maggiore* and the *Porta S. Lorenzo.*

Another piece of the arches of the *Aqua Vivgo* existed in the sixteenth century, where it crossed the Corso at the angle of the Via di Caravita; other parts were found under the

Church of S. Ignazio. The water of this aqueduct was distributed from eighteen *Castella*, in Regions vii., ix., and xiv.

VII. *The Aqua Alsietina* was probably constructed by Augustus to supply his great *Naumachia*, on the transtiberine side of Rome. It was supplied by the *Lacus Alsietinus*, now called *Lago di Martignano*, which was near the fourteenth milestone of the *Via Claudia*. The water was not fit to drink, and its level was the lowest of all the aqueducts—"*omnibus humilior Alsietina est*," as Frontinus says. The *Naumachia* of Augustus was in the plain between *S. Cosimato*, *S. Francesco a ripa*, and the foot of the Janiculan Hill, where some remains of it have been discovered.

VIII. *The Aqua Claudia;* and IX. *The Anio Novus*, were both begun by Caligula in A.D. 38, and completed by Claudius in A.D. 52. Along a great part of their course they are carried on the same line of lofty arches, the highest of all the Roman aqueducts.

The source of the *Aqua Claudia* was by the thirty-eighth milestone of the *Via Sublacensis*, near the start of the *Aqua Marcia:* it was fed by two springs, the *Fons Cæruleus* and *Fons Curtius*, as is recorded in the inscription on the *specus* over the double travertine gateway of the *Via Labicana* and *Prænestina* (now the Porta Maggiore).

The *Anio Novus* started from a stream of that name near the forty-second milestone of the *Via Sublacensis*, where remains of its *incile* or inlet from the river bank and *piscina* still exist. Near the city these two streams were united and carried on the same arches, the *specus* of the *Anio Novus* being above that of the *Aqua Claudia;* within the city the two waters were mixed—"*Claudia et Anio Novus extra urbem proprio quæque rivo erogabantur, intra urbem confundebantur*," as Frontinus says.

The inscription on the upper *specus* over the *Porta Maggiore* is—TI · CLAVDIVS · DRVSI · F · CAISAR · AVGVSTVS · GERMANICVS · PONTIF · MAXIM · TRIBVNICIA · POTESTATE · XII · COS · V · IMPERATOR · XXVII · PATER ·

PATRIAE · AQVAM · CLAVDIAM · EX · FONTIBVS · QVI · VOCABANTVR · CAERVLEVS · ET · CVRTIVS · A · MIL LIARIO · XXXXV · ITEM · ANIENEM · NOVAM · A · MILLIARIO · LXII · SVA · IMPENSA · IN · VRBEM · PERDVCENDAS · CVRAVIT. The lengths of the aqueducts given in this inscription, namely the *Aqua Claudia* 45 miles long, and the *Anio Novus* 62, were the actual length of the *specus*, not the shortest distance from point to point.

Below this, on the *specus* of the *Aqua Claudia*, is another inscription, recording the restoration by Vespasian, in A.D. 71, of this aqueduct (AQVAS . . . INTERMISSAS · DILAPSASQVE), which must have been badly built to need repair within twenty years of its construction.

A third inscription, lower still, records another restoration by Titus in A.D. 81, the last year of his reign. About A.D. 200 it was again restored by Severus and Caracalla, who built brick-faced concrete arches under many of the stone arches of Claudius.

In the reign of Nero this Claudian aqueduct was extended over the Cœlian to the Palatine, by a magnificent series of double arches of concrete, faced with unusually neat brickwork.

A great number of the arches of this extension still exist in good preservation, with, in places, later arches built under them by Severus in 201, probably to support them after injury by an earthquake.

A branch built by Nero diverges from the main line of his extension, passing over the Arch of Dolabella towards the Colosseum, while the rest of the water was carried on to the Palatine.

A fine lofty gateway in this aqueduct exists near the Porta Maggiore, decorated with moulded brick imposts[1] and

[1] The impost moulding is a large *cymatium*, formed of sixteen courses of brick. This part of Nero's aqueduct, with its lofty archway spanning the road, is one of the finest examples of brick-faced concrete which exists ;

short string courses. A large marble slab for an inscription once existed over this gateway on both sides; the slabs are gone, but the holes to fix them are visible.

Magnificent remains of the Claudian Aqueduct, built of massive blocks of tufa, still exist for many miles across the Campagna.

In addition to the above mentioned nine aqueducts which existed in the time of Frontinus, four others were added later.

X. *The Aqua Trajana* was constructed by Trajan in A.D. 109, three years after the death of Frontinus. Its completion is recorded on the reverses of bronze coins of the year A.D. 110, with the legend AQVA · TRAIANA, and a representation of the water as a river-god reclining on the ground holding a reed, and with one arm resting on an urn from which issues a stream of water; over him is a circular vault supported by two columns.

In 1830 a slab of travertine was found on the course of this aqueduct, about 10 miles from Rome, with an inscription recording its construction, and the purchase by Trajan of a strip of land 30 feet wide, the usual width for the reserved strip on which no planting was allowed. After the name and titles of the Emperor, with the date A.D. 109 (TR · POT · XIII), the inscription runs—AQVAM · TRAIANAM · PECVNIA · SVA · IN · VRBEM · PERDVXIT · EMPTIS · LOCIS · PER · LATITVD · P[*edes*] XXX.

The source of this aqueduct was derived from a number of springs near the *Lacus Sabatinus*, the modern *Lago di Bracciano*. Its termination was at a magnificent *castellum*, on the Janiculan Hill, which is shown on several coins of Trajan, adorned with columns and a reclining statue with an urn; the legend is S · C AQVA · TRAIANA.

This aqueduct was restored by Belisarius, after being cut by the Gothic leader Vitiges in 537. It was repaired by

the facing of the arches, with their two rings of *tegulæ bipedales*, or 2-feet tiles, is extraordinarily neat and close-jointed.

several of the Popes, and still supplies the great Fontana Paolina behind S. Pietro in Montorio, and the fountains in front of S. Peter's, together with a large area of the trans-tiberine city.

XI. *The Aqua Alexandrina* was constructed about A.D. 226 by Severus Alexander, to supply his enlargement of the *Thermæ* of *Nero*, near the Pantheon, called after him the *Thermæ Alexandrinæ;* see page 346. Its source was near Gabii, about 14 miles from Rome, the same water which now supplies Rome under the name of the *Aqua Felice*, by means of a restoration made in 1586. The ancient course of the *Aqua Alexandrina*, after reaching the walls of Rome, is very uncertain.

This was the last aqueduct which was constructed, and the whole number of separate aqueducts never exceeded eleven. Procopius makes up the number to fourteen, by counting as distinct aqueducts (ὀχετοί) what were really only branches, made to tap the existing *specus* of certain of the pre-existing ones. Thus he includes the *Specus Octavianus* leading from the *Anio Vetus*, and the *Specus Antoninianus* made to supply the Baths of Caracalla; and thirdly, he counts the *Aqua Augusta*, constructed by Augustus to supply certain country estates of his, but which did not come near to Rome. The *Aqua Algentia* appears to have been a name invented from a corrupt reading of *Alsietina;* see Jordan, *Topogr.* p. 223 *seq.*, and Lanciani, *Com. di Front.* p. 185.

Fountains existed in enormous quantities all over the city, either in the form of large basins of water (*lacus*) or jets of water (*salientes*). The number of these set up by M. Agrippa in the reign of Augustus is mentioned above, p. 470.

The *Regionary Catalogues* give the number of *lacus* in each *regio* of the city, in many cases amounting to as many as eighty in one *regio;* see Urlich, *Cod. Topogr.* pp. 2 to 27. The larger fountains combined both *lacus* and *salientes*, and were large and magnificent structures, usually decorated with marble columns, linings, and statues in niches. The *Nymphæum of Severus*

Alexander, which received the *Aqua Julia*, is the finest existing example of one of these.

The so-called *meta sudans* by the Colosseum is almost the only existing example of a fountain with jets of water pouring into a large circular basin. Nothing now exists but the brick and concrete core of the lower part of the fountain, which was originally more than three times its present height, and was shaped like a tall marble-lined cone, with water issuing from the summit, and from various points below. Its original form is shown on a sculptured sarcophagus now in the *galleria lapidaria* of the Vatican. Near the base were niches for statues holding urns, which can still be traced in the existing much restored core of the lower part. A central circular hollow, 2 feet 3 inches in diameter, contained the rising pipes to supply the upper jets. The brick facing appears to be of Flavian work, and the fountain is shown on coins of Domitian by the side of the Colosseum, so it is probably of about the same date as the great Flavian Amphitheatre. The name *meta sudans* does not occur earlier than the *Regionary Catalogues* of the fourth century. Any tall circular object was called a *meta;* the form of this fountain resembled somewhat the *metæ* or goals at the ends of the *spinæ* in the *Circi;* the epithet *sudans* (sweating) was probably applied from the way in which the water seemed to ooze from it.

Some small *lacus* or shallow basins of water have recently been exposed among the row of buildings along the north-east side of the *Via Nova*, near the Arch of Titus. These are divided into several rectangular basins lined with the hard *opus signinum*, or cement made of pounded brick, which was always used for water channels and cisterns; see p. 37. The various compartments are arranged so that one overflowed into the other; they look as if they were intended for washing clothes. A great number of isolated fountains appear to be shown on many fragments of the marble plan; see Jordan *Forma Urbis Romæ*.

CHAPTER XV.

ROADS, BRIDGES, AND THE AURELIAN WALL.

The Roads of Rome.

These ranked with the Aqueducts, as being among the most costly and carefully constructed pieces of engineering which the inartistic Romans produced with such skill and disregard of human labour.

The construction of the roads, which were called *viæ silice stratæ*, resembled that described by Vitruvius, vii. 1, for pavements (see p. 37). Certain modifications were employed according to the different characters of the ground over which each road passed; in a rocky place the *statumen* or lower bed of rough stones was omitted, and the rock was carefully levelled to receive the *rudus* and *nucleus*, on which lava paving (*silex*) was bedded. On marshy ground the *statumen* was replaced by wooden piles; and where the road passed over a valley it was frequently raised on a viaduct of massive masonry, either constructed with a solid wall or with rows of arches, according to its height. This is the case with the oldest of the roads of Rome, the *Via Appia*, where it passes through the valley of Ariccia and elsewhere. In other places, to avoid *detours* and to keep the road as level as possible, deep cuttings through the hill were formed, in some case 60 feet deep, sunk through the solid rock.

Some details in the formation of a Roman road are described by Statius (*Sylv.* iv. 3, 40 to 53) in his account of

the repair of part of the *Via Appia* by Domitian; the margins of the road were marked out by the digging of two ditches (*fossæ*) within which the *gremium* or enclosed space was first excavated and then filled in with the foundations for the paving—*dorsum*, so called from its being curved to throw off the rain-water. The paving of the central part was made of large blocks of lava (*silex*), of polygon shape, jointed with the most minute accuracy. The larger pieces measured about 4 feet by 3 feet. These blocks have in most places been carelessly relaid in late times, and present a very different appearance to what they did under the Republic and early Empire. One piece only in the Forum, that by the steps of the Temple of Saturn, is still preserved in its original state with closely fitting joints; see p. 156.

The principal roads varied in width from 10 to 15 feet; some of the small cross roads were only 4 feet wide. The lava paving was bordered by a massive curb, usually of tufa, peperino, or travertine.[1] The latter was used in the *Forum Magnum* along the *Sacra Via*, and the road which skirted the opposite side of the central paved space. The side pathways (*margines*) appear to have been laid with gravel (*glarea*) outside Rome, and inside the city with rectangular slabs of travertine or other hard stone—*saxo quadrato stratæ*. The phrase used for constructing a road was *viam munire* or *sternere*.

The earliest road of this solid construction was the *Via Appia* from Rome to Capua, and extended in later times to Brundusium (Brindisi). It was made, according to Livy, ix. 29, and Frontinus, *De Aqued.*, by the censor Appius Claudius Cæcus in 313 B.C., at the same time that he constructed the first aqueduct which brought the *Aqua Appia* to Rome. Earlier roads of course existed, but were probably not paved with stone. An abundant supply of lava for paving was got from the great stream which had flowed from the Alban hills

[1] In some places along the *Via Latina* the curb as well as the central paving is made of lava.

to within 3 miles of Rome; this is still quarried for the paving of the modern streets at a place near the tomb of Cæcilia Metella. For some miles the *Via Appia* passes over this great flood of lava, and a great part of its old paving still exists, especially between Rome and the foot of the Alban hills.

Livy (x. 23) mentions the use of *saxum quadratum*, or rectangular slabs of stone for small paths; he says that a foot-road (*semita*) was laid in this way by the two Ogulnii, ædiles for the year 296 B.C., from the *Porta Capena* to the Temple of Mars, which stood outside the gate. At xli. 27, Livy appears to say that as late as 174 B.C. roads were only *silice stratæ* within the city, and that gravel was used outside; but the passage is much mutilated, and he is probably referring only to the gravel side-walks. In this passage he says that the *Clivus Capitolinus* was paved with lava in 174 B.C.; the fragment shown at p. 156, may possibly be of that date.

During the early years of the Republic the roads were under the care of the censors (see Cicero, *De Leg.* iii. 3, and Aur. Victor, 72), and failing them under the ædiles. In the second century B.C. four officials, called *quattuor-viri viarum* were appointed, and inscriptions show that these lasted till the reign of Hadrian or later; *οἵ τε τεσσαρες οἱ τῶν ἐν τῷ ἄστει ὁδῶν ἐπιμελουμένοι*, as Dion Cassius (liv. 26) calls them.

Suetonius seems to say that the quæstors had charge of the roads in the reign of Claudius, and that he gave them instead the management of gladiatorial shows; see Suet. *Claud.* 24,—"*Collegio Quæstorum pro straturâ viarum gladiatorum munus injunxit.*" In the reign of Augustus, M. Agrippa when ædile appears to have had the management of the necessary repairs to the roads added to his numerous other duties.

In most cases, however, the extension or repairs were managed by a separate *curator* for each road—an office of much dignity and importance. Julius Cæsar was *curator* of the *Via Appia;* see Plutarch, *Cæs.* 5; and Thermus in 65 B.C., was

curator of the *Via Flaminia;* see Cicero, *Ad Att.* i. 1. Several of the emperors assumed this title, as is recorded in many inscriptions; see Gruter, *Inscrip.* cxlix-clix. Under the *curator* of each road were a number of *mancipes* or contractors, who carried out repairs and new works. One of these is mentioned on a monument erected to him by his wife, as MANCIPI · VIAE · APPIAE; see Orell. *Inscrip.* 3221.

The supply of horses and vehicles for posting on each road was managed by a class of postmasters called *junctores jumentarii.* Both these subordinate officials are mentioned in a dedicatory inscription on the pedestal of a statue of Caracalla, which was found in 1884 in the House of the Vestals. This statue was jointly dedicated by the MANCIPES · ET · IVNCTORES · IVMENTARII · VIARVM · APPIAE · TRAIANAE · ITEM · ANNIAE · CVM · RAMVLIS.

The *Via Trajana* was a branch of the *Via Appia,* so-called from Trajan who constructed it. The *ramuli* are the small cross roads leading from the three important roads mentioned before. On the side of the pedestal the date A.D. 214 is given by the record of the names of the consuls for that year.

Special rates were levied for the repair of the roads, the inhabitants of each house in the city being taxed for the piece of paving opposite.

The small country roads (*Viæ vicinales*) were paid for by a sort of parish rate (Sicul. Flacc. *De Cond. Agr.*, Ed. Goes. p. 9), and were under the care of local officers called *magistri pagorum.* The great roads were paid for either by grants from the public *ærarium,* or by private munificence; very frequently the *curator* of a road spent large sums on it out of his private fortune.

An example of this is recorded in an inscription quoted by Panvinio, *Urbs Romæ,* p. 68—L · APPVLEIVS · C · F · ANI · NIGER · IIVIR · CVRATOR · VIARVM · STERNENDARVM · PEDVM · DECEM · MILLIA · VIAM · SVA · PECVNIA · FECIT. A similar act of munificence on the part of Augustus,

who restored the Flaminian road, is recorded on an interesting *aureus*, struck in 17 B.C. On the *Obverse* is a head of Augustus with *legend*, S · P · Q · R · IMP · CAESARI · *Reverse*, part of the *Via Flaminia* carried on arches, and surmounted by a triumphal arch, on which stands the Emperor Augustus crowned by Victory, in a biga drawn by two elephants; *legend*, QVOD · VIAE · MVN*itæ* · SVNT. An inscription given by Gruter, *Inscrip.* p. 149, records that this restoration by Augustus was superintended by his nephew Caius Cæsar.

The labour employed on Roman roads, as on their other great works, was mainly that of slaves or convicts. Suetonius mentions among the cruelties committed by Caligula that he ordered many people of high rank to be branded and sent to labour in the quarries, and on the high-roads, *ad metalla aut ad viarum munitiones . . . . condemnavit;* Suet. *Cal.* 27.

A class of workmen employed to take up and re-lay the paving blocks of lava (*Silex*) were called *Silicarii;* a large number of these were employed by the *curatores* of the aqueducts; see p. 454. An immense amount of labour must have been wasted in this way by the incessant changes in the concessions of water to private houses, necessitating constant alteration of the supply pipes under the streets.

Along the sides of the roads milestones (*milliaria*) were set up, recording the distance from the gate in the Servian wall from which the road issued. Under the empire these were short marble columns, with simple base moulding and necking. The first milestone on the *Via Appia* was found *in situ* in 1584, and is now set at the top of the Capitoline steps; in addition to the numeral I., it has the name of the Emperor Nerva, who set it up, probably in place of an older one of tufa or peperino. By measuring back one mile to the line of the Servian wall Mr. Parker discovered and excavated remains of the ancient *Porta Capena.* The *Milliarium Aureum* set up by Augustus in 28 B.C., was not a milestone, but an *itinerary*, or

list of the chief places on the roads which radiated from Rome in all directions,[1] with a record of their distances from the various gates of the city; see p. 166.

Three interesting itineraries, giving the names and distances of the places on the road from Rome to Cadiz, are engraved on silver vases which had been thrown as votive offerings to Apollo into the hot springs at Vicarello near Lake Bracciano (the ancient *Aquæ Apollinares*), probably by some Spanish colonist who had derived benefit from bathing there. These inscribed vases, which date from the Flavian time, were found in the hot spring, and are now in the Museo Kircheriano.

Other words were used to mean different sorts of roads; *iter*, a foot or horse path; *semita*, a narrow footpath (*semis-iter*); *actus*, a cart-road. *Actus* and *iter* were specially legal terms, used in the laws about rights of way through private property, which was called the *jus eundi;* these burdens on land were called *servitutes* (Gaius, iv. 3).

The following are the principal roads which radiated from the gates of Rome, beginning on the south:—

I. *Via Ostiensis*, from the Servian *Porta Trigemina* and the Aurelian *Porta Ostiensis;* it passed along the left bank of the Tiber to its mouth at Ostia.

II. *Via Appia*, also from the Servian *Porta Capena* and the Aurelian *Porta Appia* (modern S. Sebastiano), constructed in 313 B.C. as far as Capua, and afterwards extended to Brundusium. It was often called the *Regina Viarum*, as being the oldest and finest of the Roman roads; Stat. *Sylv.* ii. 2, 12. The *Via Ardeatina*, which led to Ardea, was probably a branch of the *Via Appia*.

III. *Via Latina;* this branched from the *Via Appia*, a few hundred yards outside the *Porta Capena*, it then passed through

[1] Owing to the fact that the Roman roads extended into almost all parts of their empire, and that the smaller provincial roads were branches from the main arteries of traffic, the saying "all roads lead to Rome," had once more than a metaphorical meaning.

the Aurelian *Porta Latina*, and like the Appian road ended at Brundusium, passing along a more inland course.

IV. *Via Labicana;* issuing from the Servian *Porta Esquilina*, and then passing through an arch of the double aqueduct-gate built by Claudius (modern *Porta Maggiore*); it was carried on to Labicum, and then joined the *Via Latina* near the thirtieth milestone.

V. *Via Prænestina;* branched from the *Via Labicana* just before passing through the other archway of Claudius's aqueduct. It led to Gabii, and hence it was once called the *Via Gabina*, then to Præneste, finally joining the *Via Latina* near Anagnia.

VI. *Via Tiburtina*, from the *Porta Viminalis* in the Servian Agger, then through the aqueduct gate of Augustus (shown on p. 469), modern *Porta S. Lorenzo.* Thence it led to Tibur (Tivoli) and the Sabine country, and finally on to the Adriatic. The latter part of this road was called the *Via Valeria.*

VII. *Via Nomentana*, from the *Porta Collina* at the north end of the Servian Agger; then through the Aurelian *Porta Nomentana* to Nomentum, and finally branched into the *Via Salaria* at Eretum.

VIII. *Via Salaria*, also from the Colline gate, then through the Aurelian *Porta Salaria*, and north-east to the Adriatic, finally joining the *Via Flaminia* at Ancona.

IX. *Via Flaminia;* this very important northern road is said by Livy (*Epit.* xx.) to have been constructed by the censor C. Flaminius, at the same time that he built the great *Circus Flaminius*, which afterwards gave its name to the ninth *Regio* of Augustus. C. Flaminius constructed the road as far as Ariminum (Rimini) during his consulship in 187 B.C., and his colleague, M. Æmilius Lepidus, continued it, under the name of the *Via Æmilia*, to Placentia (Piacenza); it was afterwards extended to Mediolanum (Milan), and farther north in Cisalpine Gaul. This great road started from the *Via Lata*, which issued from the *Porta Ratumena*, and passed along the line of the modern Corso out through the Aurelian *Porta*

Flaminia, which was exactly on the site of the present Porta del Popolo, not higher up the Pincian Hill as was once believed on the strength of a misunderstood passage of Procopius (*Bell. Goth.* i. 23). The true site of this gate was discovered in 1879, when the Aurelian towers which flanked it were pulled down to widen the Porta del Popolo. The restoration of the *Via Flaminia* by Augustus is mentioned at p. 481.

X. *Via Aurelia*, from the gate of that name on the Janiculan Hill, passed northwards along the west coast to Pisa, and so on to Gaul.

XI. *Via Portuensis*, which also started from the transtiberine side of Rome, issued from the Aurelian *Porta Portuensis*, and passed along the right bank of the Tiber to *Portus Augusti*, near its mouth.

For an account of the roads of Rome see Bergier, *Histoire des grands chemins de l'empire Romain*, 1622; Nibby, *Vie degli Antichi*, in vol. iv. of his edition of Nardini, *Roma Antica*, 1820, and Becker, *De Rom. Muris et Portis*, Leipsic, 1842.

The Bridges of Rome.

During the early period of Rome the Tiber formed its chief defence on one side, and it was not thought advisable to construct any bridge that could not be readily destroyed on the approach of an enemy. For a long time there was only one bridge across the Tiber, and this was made to connect the outlying fortress on the Janiculan Hill with the city on the other side of the river. This was the *Pons Sublicius*, so called from the *Sublices* or wooden beams of which it was constructed. Livy (ii. 10) tells the familiar story of its destruction by the Roman garrison while the heroic Horatius Cocles kept back the Etruscan host under Lars Porsenna, who, after capturing the Janiculan fortress, were attacking Rome to reinstate the fallen dynasty of the Tarquins.[1]

[1] H. Cocles and the Sublician bridge are represented on a fine bronze medallion of Antoninus Pius; Froehner, *Med. de l'Empire Rom.* 1878, p. 60.

Its construction was traditionally assigned to Ancus Martius; Livy, i. 33. In later times it was restored by several of the emperors, and its piers were rebuilt in stone, though the bridge itself was probably always of wood. See Varro, *Lin. Lat.* v. 83; Ovid, *Fast.* v. 622; and Tacitus, *Hist.* i. 86, Its exact site is not certain, but the existing foundations of a bridge near the *marmoratum* are usually supposed to belong to it. See Becker, *De Romæ muris et portis*, Leipsic, 1842, p. 78.

The first stone bridge was not completed till 142 B.C., when the conquest of Etruria and the defeat of Hannibal had put an end to fears of invasion. This was called the *Pons Æmilius*, from the *Pontifex Maximus* and *Censor* M. Æmilius Lepidus, the builder of the *Basilica Æmilia*, who founded it, together with his colleague M. Fulvius Nobilior, in 179 B.C.; Livy, xl. 51. It is represented on *denarii* of the gens Æmilia of the first century B.C.

The arches were added in 142 B.C. by the Censors P. Scipio Africanus Nasica, and L. Mummius surnamed Achaicus (Liv. *loc. cit.*) It was sometimes called the *Pons lapideus*, as being for some time the only stone bridge in Rome; Plut. *Num.* 9. The name *Palatinus* is an invention of the mediæval writers.

The modern *Ponte Rotto* is on the site of this bridge, and part of the ancient basalt-paved road leading on to it is still visible near the *House of Crescentius*. This road was on the inside of the Servian wall, and led immediately out of the *Forum Boarium*.

The existing three arches are mainly of mediæval date, as the bridge was rebuilt after its destruction by a flood in the pontificate of Honorius III. 1216–1227. In 1598 about half was destroyed by another flood, and the gap is now bridged over by a modern iron structure.

The *Pons Fabricius* unites the Tiber island (*Insula Tiberina*) with the left bank of the river.[1] Livy (ii. 5) gives the fable

[1] See a bronze medallion of Anton. Pius; Froehner, *Med. Rom.* p. 53. The Fabrician bridge is also shown on a *denarius* of about 60 B.C., with

of the formation of this island from the corn which was cut in the *Ager Tarquiniorum* (*Campus Martius*) and thrown into the Tiber after the expulsion of the Tyrant Tarquinius Superbus. The bridge was built by L. Fabricius, one of the *Curatores Viarum*, in 62 B.C.; Dion Cass. xxxviii. 45. This is recorded by an existing inscription, repeated on both sides, across one of the arches—L · FABRICIVS · C · F · CVR · VIAR · FACIVNDVM · COERAVIT · EIDEMQ · PROBAVIT: then followed the names of the consuls for the year 21 B.C., who repaired the bridge, Q. Æmilius Lepidus and M. Lollius; the latter part of the inscription has now disappeared.

It consists of two semi-circular arches, with an opening for flood-water over the central pier; like the other Roman bridges it is built of peperino and tufa, faced with massive blocks of travertine on both sides. Travertine corbels, to support the wooden centering, are built in at the springing of the arches, a frequent Roman custom, used not only in bridges but also in aqueducts and other lofty arches, where it would have been difficult or expensive to support the centering by tall posts resting on the ground; this method was especially convenient for repairs or partial rebuilding.

Part of the ancient balustrade or screen along the sides of the bridge still exists, namely one of its upright pilasters crowned by a quadruple head or *Janus Quadrifons;* from this is taken the modern name of the bridge, *Ponte dei quattro capi.* The pilaster is grooved to receive a bronze open screen, which filled up the space between the pilasters.

The Pons Cestius, which unites the island with the opposite shore, has only one arch, with an opening for floodwater on each side of it. It was probably built by L. Cestius, Præfect of the city in 46 B.C.; see Dion Cass. xxxvii. 45.

On one of the large marble slabs which form the parapet of the bridge, is a long inscription recording its restoration in

the legend L · FABRICIVS, and a snake to indicate the proximity of the *Temple of Æsculapius* on the island.

A.D. 370 by Valentinianus, Valens, and Gratian. There are remains of an earlier inscription over one of the arches. The bridge is now called after the adjacent Church of S. Bartolomeo.

Both these bridges to the Tiber island must have occupied the place of much earlier wooden structures.

The Pons Ælius was built in A.D. 135 by Hadrian, to connect his *Mausoleum* and *Circus* with the *Campus Martius;* see Dion Cass. lxix. 23, and Spartian, *Hadr.* 19. It is shown on the reverses of bronze coins of Hadrian, dated from his third consulship. The *Einseidlen MS.* gives the dedicatory inscription, which is now lost—IMP · CAESAR · DIVI · TRAIANI · PARTHICI · FILIVS · DIVI · NERVAE · NEPOS · TRAIANVS · HADRIANVS · AVG · PONT · MAX · TRIB · POT · XVIIII (A.D. 135) COS · III · P · P · FECIT. The name of the bridge was taken either from Hadrian's prænomen *Ælius*, or else from that of his son, who died during his father's lifetime, and was the first person interred in the mausoleum.

The five arches of this fine bridge are of peperino faced with travertine; near it, along the left bank, are extensive remains of the ancient embankment wall, built of massive blocks of peperino.

The *Pons Ælius* is now called after the adjoining Castle of S. Angelo; it is mentioned by Dante in one of his most vivid similes, in which he likens the coming and going lines of sinners scourged by demons in the eighth circle of hell, to the crowd which thronged the bridge in the year of Jubilee 1300, half on their way to St. Peter's, and the other half, separated by a wooden barrier, passing in the opposite direction towards the Mount—

> " *Come i Roman, per l'esercito molto,*
> *L'anno del Giubbileo, su per lo ponte*
> *Hanno a passar la gente modo tolto:*
> *Che dall' un lato tutti hanno la fronte*
> *Verso il castello, e vanno a Santo Pietro;*
> *Dall' altra sponda vanno verso il monte."*
>
> *Infer.* xviii. 28–33.

The Mount is probably that on which the Lateran Basilica stands, which, after St. Peter's, was the greatest attraction to the pilgrims who crowded to Rome.

The Pons Aurelius, mentioned in the *Notitia*, was probably on the site of the modern *Ponte Sisto*. The date of its founding is not known, but Marlianus (*Topogr. Rom.* cap. cxxi) gives an inscription, now lost, which recorded its restoration in the time of Hadrian. The names *Janicularis* and *Antoninianus*, which are sometimes given to this bridge, appear to be inventions of the mediæval topographers.

The Pons Neronianus or *Vaticanus* was begun by Caligula and completed by Nero, to give an approach to the *Horti Agrippinæ* and the great *Circus* which stood by the Basilica of S. Peter. Some foundations of this still exist, a little way below the *Pons Ælius*, and are visible when the river is low.

The Pons Triumphalis was probably not a separate bridge but a title given to the *Pons Neronianus*.

A good account of the Roman bridges is given by Becker, *De Rom. Mur. et por.* p. 78 *seq.*; and Piale, *Antichi ponti*, in the *Atti. d. Pont. Acad.* 1831.

The Walls of Aurelian.

During the long period when the Roman power existed almost without a rival, and quite free from any dread of attack at home, no fortifications were needed to defend the city. Even under the Republic Rome had far outgrown the limits of the Servian enclosure, and under the Empire the greater part of the primitive wall had been pulled down and its very site obliterated by the buildings of the rapidly growing city. Thus Dionysius (iv. 13) speaks of the Servian wall as being in his time (first century B.C.) δυσευρέτον (*hard to find*) on account of the houses built over it.

The fourteen *regiones* of Augustus included not only the thickly populated area of Rome as it was in his time, but also

in some directions a wide extent of suburb beyond the houses which, under the later Empire, became the site of still further extension of the city.

The boundaries of these *regiones* appear to a great extent to have determined the line of the great wall which Aurelianus planned and partly carried out in A.D. 270–5, his circuit being formed, at least on the left bank of the river, to skirt the outer limits of the Augustan *regiones;* see plans of Rome. But on the transtiberine side the Aurelian wall only included a small part of *Regio* xiv. or *Transtiberina.*

Towards the end of the third century A.D. not only was the Roman power on the decline, but the city of Rome itself was beginning to be in danger from the invasions of the Germans and other northern races—especially dangerous at a time when the great armies of the Empire were fully occupied with campaigns in distant Oriental countries.[1] It was on this account that Aurelianus constructed the wonderfully strong and extensive line of fortification which resisted all the attempts of the Goths to destroy it, and has in great part lasted down to the present day.

After the speedy death of Aurelianus (A.D. 275) the work was carried on by Probus and completed by him in 280 (Zosimus, i. 49). About a century later the walls were restored and strengthened by the addition of a number of gate-towers, replacing in many places the original towers of Aurelian. This was mainly the work of Arcadius and Honorius, A.D. 395–425, as is recorded by existing inscriptions over several of the gates; see Procop. *Bell. Goth.* i. 19. These inscriptions run thus—S · P · Q · R · IMPP · CAESS · D · D · INVICTISSIMIS · PRINCIPIBVS · ARCADIO · ET · HONORIO · VICTORIBVS · AC . TRIVMPHATORIBVS . SEMPER · AVGG · OB · INSTAVRATOS · VRBIS · AETERNAE · MVROS · PORTAS · AC · TVRRES · EGESTIS · IM-

[1] See Vopiscus, *Aurel.* 21 and 39; Zosimus, i. 37, 49; and Eutrop. ix. 15.

MENSIS · RVDERIBVS . . .; the rest of the inscription records the erection of honorary statues to Arcadius and Honorius to commemorate the work.

One of these inscriptions can most conveniently be examined outside the *Porta Maggiore*. The gate itself was pulled down in 1838, partly with the object of exposing the *Tomb of Eurysaces;* and its upper part, with a row of arched windows, is now set up by the side of the road.

The Aurelian walls suffered much injury from the repeated attacks of the Goths (see Procop. *Bell. Goth.* iii. 23, 24) and were frequently restored, especially by Theodoric about A.D. 500 and by Belisarius about A.D. 560, as well as by many of the Popes in the eighth and ninth centuries, and in fact throughout the Middle Ages.

An interesting and minute account of the wall and its gates is given in the *Einseidlen MS.*, the unknown writer of which appears to have visited Rome in the ninth century. He gives a description of the complete circuit, counting, from gate to gate, the number of towers, the windows, the *necessaria*, and even the battlements, in the following way—*A Porta Latina usque ad Appiam, turres xii., propugnacula clxxiv., necessaria vi., fenestræ majores forinsecus lxxx., minores lxxxv.* He numbers 14 gates in all and 383 towers; the 14 gates still exist, but many of the towers have disappeared.[1]

With the exception of the part where the wall skirted the Tiber, most of the circuit of the main city still exists, but a great part of the line round the transtiberine quarter has now disappeared; see Becker, *Handb.* i. p. 192.

By far the most perfect piece of wall is that in the gardens of the Villa Ludovisi, where it skirts the edge of the Pincian Hill; other well preserved parts are those near the *Amphi-*

[1] Other accounts of the wall and its gates are given by Procopius, *Bell. Goth.* i. 19; by William of Malmesbury (eleventh century), and the *Graphia Aureæ Urbis* (thirteenth century), the latter mentions 362 towers as then existing; see Urlich, *Cod. Topogr. Rom.* p. 114.

theatrum Castrense, and between the *Porta Latina* and *Porta Ostiensis*.

In most cases the towers have been cut down from their original height, but two or three still exist in the Ludovisi Gardens, almost perfect, together with the stairs leading to the top of the wall and the upper chambers in the towers.

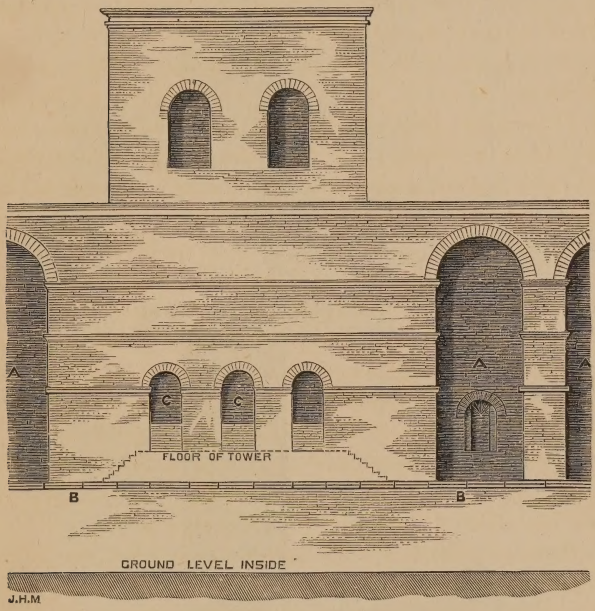

Fig. 55.
Elevation of part of the Wall of Aurelian.

The wall is built of tufa concrete, mixed with some broken brick, with the usual facing of triangular bricks from $1\frac{1}{4}$ to $1\frac{3}{4}$ inches thick, and joints $1\frac{1}{4}$ to $1\frac{1}{2}$ inch. It is about 12 feet thick, with a vaulted sentinels' passage running all round the circuit of the wall, which was about 12 miles long; see figs. 55 to 57.

This passage, which is formed in the thickness of the wall,

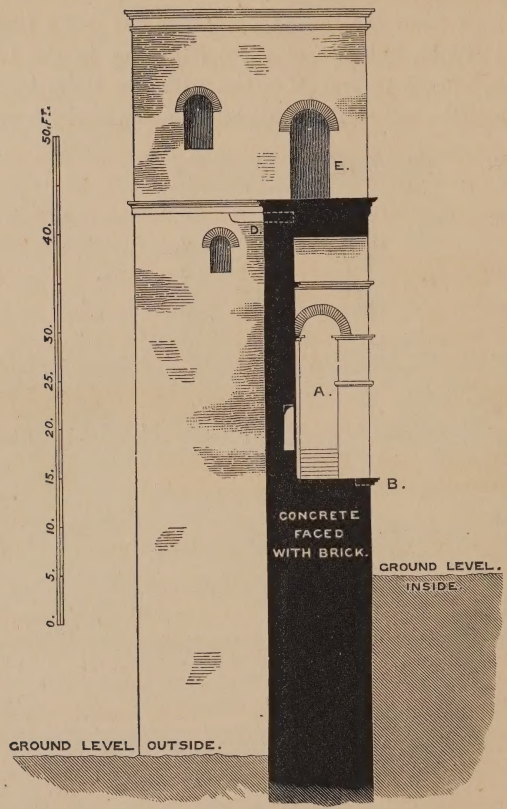

Fig. 56.

Section of the Wall of Aurelian. The references refer to both these cuts.

A A. Sentinels' passage.
B. Stone stringcourse.
C C C. Windows into the lower room in the tower.
D. Travertine corbels to support the necessaria at the top of the wall.
E. Door opening from the tower on to the top of the wall.

is open on the side towards the city with a row of tall semi-

circular arches; there are usually six of these arches between each pair of towers.

The floor of the passage is in most places 8 to 10 feet above the ground inside. On the outside the ground is in many places much lower than on the interior, owing to the wall being built along the edge of a cliff or slope. Thus the wall is in parts about 60 feet high on the outside, and 40 feet on the inside.

At regular intervals of about 45 feet tall square towers

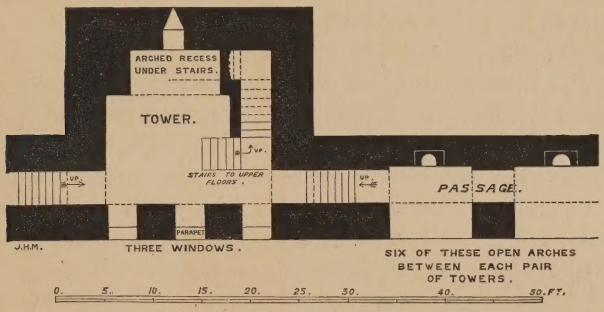

Fig. 57.

Aurelian's Wall: plan showing one of the towers and the passage in the thickness of the wall. This is taken from that part of the wall which skirts the Ludovisi gardens.

were built, with their projection on the outside of the wall. Arched doorways high up in the towers opened on to the top of the wall, so that its summit formed a continuous walk for the garrison over the vaulted roof of the sentinels' passage below; see fig. 56. It was once defended with battlements, but these have in most places wholly disappeared. Each tower was divided by vaulted floors into three stories, with a narrow stair winding round two sides of the tower (see plan on fig. 57) leading to the top of the wall and to its upper chambers.

Small slits, set in semi-circular niches for shooting through,

are formed in the walls of the towers and all along the sentinels' passage; owing to this passage being raised high above the ground the lower part of the wall, which was most exposed to the battering-rams of assailants, was of solid concrete 12 feet thick, unweakened by any cavity; see section on fig. 56.

In a similar way the lower part of the towers is quite solid, while the upper portion contains the three stories of chambers, each about 11 feet 6 inches by 13 feet, not counting the space occupied by the stairs. The lowest chamber opens with round arches into the sentinels' passage, which is thus not interrupted, but passes without a break all along the circuit.

On the side towards the city the towers are lighted by arched windows, of which three, each 3 feet 10 inches wide, open into the lowest chamber. In some cases the floor of this chamber is raised a few steps above the passage, while in other parts of the wall, both floors are at the same level.

At some places on the outside, in the angle between the tower and the wall, at its highest point, long travertine corbels are built in to support *necessaria;* see fig. 56.

The battlements appear not to have been corbelled out; they still exist on some of the towers and over the *Porta Latina*, where they are formed of slabs of travertine.

Circuit of the Existing Wall and its Gates.

Beginning by the bank of the Tiber on the south of the city, there is a long well-preserved piece of wall, with all its internal rows of arches, as far as where it abuts against the Pyramid of C. Cestius, close by the Ostian Gate.

The *Porta Ostiensis* is one of the finest and best preserved of all the gates. The central part, with its arched doorway, is of travertine. The outer arch is grooved to receive a portcullis (*cataracta*), and from the inner and higher arch two travertine corbels project, which received the upper pivots of

the doors; the lower ones being let into holes in a massive travertine threshold.

Above this stone archway is a battlemented wall of brick-faced concrete pierced with a row of seven arched windows, opening into a gate-chamber with similar windows on the inside. On each side are two brick-faced towers with semi-circular projection on the outside.

The top story of these towers is pierced with arched windows, and over one of them a brick cross, inlaid in the facing, marks that it was built by the Christian Emperor Honorius.

Then comes a long piece of well-preserved wall of Aurelian's time, with the internal arches very perfect, but the external facing a good deal patched and restored.

In many places the modern road, which encircles the main part of Rome outside the walls, is cut below the level of the foundations, and has exposed the soft tufa rock on which the wall is set.[1]

At one point between the Ostian and Appian gates, where the wall makes a sharp angle, a very fine bit of an older building is included in the line. This was an archway flanked by two engaged Corinthian columns with enriched architrave and capitals, all neatly moulded in terra-cotta; the brick facing, which is of extraordinary beauty and neatness, appears to date from the first century A.D.

Little now remains of the Corinthian columns, but their outline and parts of the capitals can be traced.

When this archway, probably part of some suburban villa, was included in the wall, it was blocked up, and it was certainly not the gateway of an older line of defence, as was stated by Mr. Parker, who calls it the *Porta Metrovia*, the real site of which was probably where a long piece of wall was rebuilt in the sixteenth century by Ant. Sangallo, at a point a little further on.

[1] Much injury is being done to the walls at many places by this careless undermining of the foundations.

Many marble tablets let into the external face of the wall near here, record repairs by Alexander VI., Innocent X., and other Popes.

The Porta Appia is the finest of all the existing gates; it appears to be of the time of Honorius.

The central archway and the lower part of the two flanking towers are of large blocks of fine white marble, backed with concrete. These blocks were evidently taken from some earlier building; possibly the *Temple of Mars*, which stood outside the *Porta Capena*. The keystone of the inner arch is incised with a cross within a circle, and the words ΧΑΡΙϹ·ΑΓΙΕ·ΚΩΝΟΝ·ΑΓΙΕ·ΓΕΩΡΓΙ, "*Mercy, Saint Konon, Saint George!*"

On one of the marble jambs is an incised figure of St. Michael and the devil, with a fourteenth-century inscription recording a conflict which took place at this gate. As in the *Porta Ostiensis*, the wall over the marble gate is of brick-faced concrete, and has five windows.

The third and uppermost story of the towers has a semi-circular projection pierced with windows. The second story, also faced with brick except part of one which is of tufa, is square like the marble stage. This gate also had a portcullis.

Next comes a piece of Aurelian's wall, with many external repairs of various dates, and some slabs with the arms of Pius IV. (Medici) and Urban VIII. (Barberini).

The Porta Latina, now blocked up, is built of travertine, between two semi-circular brick-faced towers. It also is of the time of Arcadius and Honorius, as was recorded in an inscription under its row of five windows, given by Nardini in his *Roma Antica*.

The semi-circular arched window-heads, like those in some of the other gates, are cut out of one slab of travertine. The keystone of the inner arch has an incised cross within a circle, and had corbels with pivot holes on which the door swung. The outer key-stone has the ☧ between A and Ω.

The next piece of wall is much restored, but some of

Aurelian's towers are well preserved, except that they have lost the story which rose above the top of the wall.

Between the *Porta Latina* and the Lateran Basilica an open stream, the *Crabra*, passed under the wall in its course towards the *Circus Maximus*, round which it flowed, forming a *euripus* or open channel enclosing the central space. Over this stream there is an archway in the wall, now blocked up; this was merely a postern gate.

A little further on the wall abuts against extensive remains of the ancient Lateran villa (*Domus Laterana*), one angle of which projects a considerable distance beyond the Aurelian line of circuit. The original house on this site was built by Plautius Lateranus, a senator, who was put to death by Nero; it afterwards came into the possession of a later Lateranus, a member of a different family, to whom it was presented by Severus in A.D. 197, and was finally given by Constantine to the Bishop of Rome (Sylvester) as a site for the new church, which was hence called the *Lateran Basilica*.

The existing building, which is of great height and solidity, appears to date from the early part of the third century A.D. Some of its rooms extended much farther beyond the line of Aurelian's wall, but were destroyed, leaving only that part which could be worked in with the new circuit wall round the city. The start of some of the cross walls of this destroyed part can still be traced; they were of massive concrete faced with brick, and were 15 feet thick.

In the upper part of the existing wall of this great house there are rows of arched windows, and above them a number of travertine corbels which once carried projecting battlements; another part of the wall has a series of buttress-like pilasters, and the whole building was one of unusual strength and adaptability for defence, on account of which it was in part preserved as a link in Aurelian's wall. That part of the house which was not included in the Aurelian circuit was probably destroyed in the reign of Constantine, when the Lateran

Basilica was built. Remains of the walls of this large house and mosaic pavements were exposed in 1880, while excavations were being made for the foundations of the new apse of the Basilica.

The Porta Asinaria (now closed) is a few paces beyond the remains of the *Domus Laterana;* the origin of its name is unknown. It is a fine and well preserved gate, wholly faced with brick, and, like the former gates, is probably of the time of Honorius.

On each side is a massive tower, with semi-circular projection of unusual size. On the inside this gateway is exceptionally well preserved, although buried in accumulated earth to above the top of the entrance; it had large vaulted rooms in the towers behind the circular projection, as well as the usual long narrow chamber over the gate, two stories high, with rows of arched windows.

Though so much buried in rubbish on the inside, the outside of this stately gateway is exposed to its full height. A few yards farther on is the sixteenth-century *Porta San Giovanni*, which is used instead of the now blocked up *Porta Asinaria.*

Next comes a long piece of very well preserved Aurelian wall, with its sentinels' passage and rows of inner arches very complete.

Near the Basilica of S. Croce in Gerusalemme the wall includes in its circuit the *Amphitheatrum Castrense*, the arches of which were built up at the time when Aurelian included it in his wall, see p. 328.

Passing on from this amphitheatre, after a long piece of wall which has been mostly rebuilt in mediæval and modern times, a place is reached where the Aurelian wall is built along the line of the great Claudian Aqueduct, as far as the double archway built by Claudius to carry the water-channels of the *Anio novus* and *Claudia* over the fork of the roads leading to Præneste and Labicum, the modern Porta Maggiore, see p. 472.

By this Aqueduct-gate is set the inscription in honour of Arcadius and Honorius, mentioned at p. 489; the gate of Honorius, destroyed in 1838, was built of travertine, and resembled the Latin gate.

Its upper row of six arched windows, with the letters S · P · Q · R · between them, is set by the roadside. The inscription is cut under the sills of the windows.

Many of the tufa piers of the Claudian Aqueduct are embedded in Aurelian's wall near this gate; some of the great blocks are incised with masons' marks, a monogram made of the letters A L, which is repeated several times.

The next length of wall is much restored on its outer face, and is cut through by the modern railway arch. A good deal of restoration is done with blocks of tufa taken from older buildings, probably the work of Belisarius in the sixth century. At some distance from the Porta Maggiore a flat-arched gate has been at some time inserted in the Aurelian wall. It is built with travertine quoins, and long lintel stones meeting in the middle with a small keystone. The name and date of this gate is unknown; it has for long been blocked up, and was probably not one of the main entrances of the city.

Next comes an older building which has been included in the Aurelian line of wall. This is a large *Castellum* of the *Aqua Tepula*, of about the time of Severus Alexander circa A.D. 230.

At the south angle the opening for the *specus* of the aqueduct which supplied it can be seen; it has a triangular top, formed by two large tiles leaning together, as shown at p. 456. It is now blocked up.

The upper part of this great *Castellum* has several door-openings, which appear to have opened on to wooden galleries running along the outside of the wall. The lower of these floors was partly supported by a long row of travertine corbels; the upper floor had wooden joists projecting from the wall, the holes for which are visible immediately below the doorway at the higher level. After that the Aurelian walls skirted

the triple aqueduct of the *Aqua Julia*, *Tepula*, and *Marcia*; many of the tufa piers of this fine structure were destroyed in 1884, see p. 419.

The Porta Tiburtina (modern P. S. Lorenzo) is flanked on the outside by two of the original square towers of Aurelian. The central part, which is of travertine, with six round-headed windows over the entrance, resembles the *Porta Latina*; this part is of the time of Arcadius and Honorius, as is recorded by an inscription below the windows, like that given at p. 489. Honorius also added two towers, partly built of massive blocks of travertine, on the inside of the gate. These were destroyed in 1869 by Pius IX. in order to use the materials for a monument on the Janiculan Hill to commemorate the Œcumenical Council, the erection of which was prevented by the entrance of the Italian army in the following year. Close against the inside of the existing gateway is the fine travertine arch shown on p. 469, which was built by Augustus to carry the three *specus* of the *Aqua Julia*, *Tepula*, and *Marcia*. The base of this arch is at a much lower level than the adjoining one, owing to accumulations of earth and rubbish during the four centuries which had elapsed between the time of Augustus and that of Honorius.

Then follows a long piece of wall much patched and restored, from the time of Belisarius downwards, as far as the *Prætorian Camp*, which is described at p. 399. In the angle where the Aurelian wall joins the camp, there is a gateway known as the *Porta Clausa*, or *closed gate*, which appears to have been blocked up as early as the ninth century, as it is not mentioned in the list given in the *Einseidlen MS.* It is of massive travertine, with six round-headed windows over the entrance archway, like the *Porta Latina*, and is evidently the work of Honorius. Its ancient name is unknown.

The Porta Nomentana, now blocked up, comes a little way beyond the *Prætorian Camp*. It was flanked with two semi-

circular projecting towers, one of which remains, and appears to be of the time of Aurelian. Close by is the modern *Porta Pia*, so called after Pius IV. Two of Aurelian's towers were destroyed to make room for it. By the side of the *Porta Pia* is the modern filling up of the breach made by the Italian army in 1870.

The Porta Salaria was flanked with two semi-circular towers like those of the Porta Nomentana, but these have been recently destroyed, and a new gateway built, the modern *Porta Salara.*

The tombs which were found here embedded in the towers are described at p. 431. According to Varro, *Re Rus.* i. 14, 3, the name *Salaria* is derived from the salt which was exported from this gate to the Sabine mountains.

Beyond the *Porta Salaria* comes first a much restored length of wall, and then the best preserved piece of all, that which skirts the Ludovisi gardens, with its inner arcade quite complete, and some of the towers nearly so, up to their full height. At one point a piece of the moulded brick cornice, which ran along the top of the wall below the battlements, still remains.

The Porta Pinciana, now closed, comes next. This picturesque gate is set in an angle of the wall, so that the semi-circular towers, which project on each side of it, are set askew in plan. These are partly faced with brick, and partly with mixed brick and tufa.

The entrance archway is of massive travertine. The key-stone of the arch has a cross within a circle incised upon it, like those on the *Porta Appia* and *Latina.* Unlike the other gates of Honorius this has no row of windows over the entrance, but only small slit holes.

Then follows a long piece of much restored wall; and, at the most northern point of the circuit, the Aurelian wall runs into the massive remains of a building faced with beautifully neat *opus reticulatum*, dating probably from about the middle of the first century B.C. The walls are of tufa concrete, of

immense height and thickness, and on the outside were decorated with a series of semi-circular niches, high above the ground. Owing to the failure of the foundation part of this wall has sunk and fallen forward, probably soon after it was built. It is mentioned by Procopius as the "broken wall," *περίβολον διερρωγότα*; see *Bell. Goth.* i. 24; hence it is now called the *muro torto*. These remains evidently belonged to the substructures of some important building on the *Collis Hortorum* (Pincian Hill), but nothing more can be asserted about it.[1]

The greater part of this noble wall, with its carefully fitted *opus reticulatum* and rows of niches, has recently been concealed by a modern stuccoed wall along the eastern edge of the Pincian gardens—an utterly needless piece of barbarism.

After passing round the angle of the *muro torto*, but little remains of the Aurelian wall for some distance.

One piece appears to have been rebuilt at the founding of the Church of S. Maria del Popolo, which stands close to the line of the old wall.

The *Porta Flaminia*, now the *Porta del Popolo*, was flanked by two towers of Aurelian, which have been recently destroyed. That this is the exact site of the *Porta Flaminia* is mentioned at p. 484. Thence to the Tiber the wall is much injured and the towers mostly destroyed.

After reaching the bank the wall skirted the river for some distance, following the curve of the Tiber all along the *Campus Martius*. Of this part nothing remains but the foundations, parts of which are sometimes visible when the water is low. At a point nearly opposite the Theatre of Pompey, the wall passed to the other side of the Tiber, forming a great loop, including the Janiculan Hill, and the plain between it and the Tiber.

Near the river bank is the *Porta Septimiana*, of which only

[1] These remains have been said to belong to the *Tomb of the Domitii*, but without sufficient reason.

part of the side walls exist in a much mutilated state. The present arch was built about A.D. 1500, and has a row of small machicolations over it.

The original archway was probably the entrance to the *Thermæ of Sept. Severus*, which was included by Aurelian in the circuit of his wall; and hence came the name of this gate. The *Porta Septimiana* is not included in the list of Procopius (sixth century) or the ninth century *Einseidlen MS.*, possibly because, at that early time, it still led into the enclosure of Severus's Baths, and was not one of the exits from the city.

From this gate the wall runs up a slope of the Janiculan Hill to the modern *Porta S. Pancrazio*, which is on the site of the ancient *Porta Aurelia*. Little remains of this piece of wall, and what does exist is much hidden by houses.

From the *Porta Aurelia* issued the *Via Aurelia vetus*. Hence the wall makes a sharp angle and again descends to the river. Very little of this part now exists.

Near the bank of the Tiber is the site of the Aurelian *Porta Portuensis*, which was destroyed by Urban VIII.; the modern wall and the *Porta Portese* are not in the place of Aurelian's wall and gate, but some distance from them on the inside. The wall then re-crossed the Tiber, and recommenced on the other side near the great *Emporium*, an immense building with wharfs along the river, used to store goods which were brought to Rome by water. Thence it again skirted the left bank till it reached the south-west angle of the city, the point at which this short account of the Aurelian circuit started. But little exists of this piece except the lower parts and foundations of the walls and towers.

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PLATE OF THE FORUM MAGNUM.

REFERENCES TO THE NUMBERS.

1, 1. (*Basilica Julia*) existing marble piers and fragment of screen. 2. Impression of marble pier in the late archway of brick-faced concrete.

3. Only remaining one of the ancient travertine piers.

4, 4. Chambers of tufa and travertine, with traces of the stairs.

5. *Tabula lusoria*, with an inscription.

6. Opening into the *Cloaca maxima*. 7. Massive travertine pedestal. 8, 8. Paving of *Porta Santa* and *Africano* marbles.

9, 9. Paving of various oriental marbles. 10. Probable position of the arch of Tiberius. 11, 11. Existing granite columns of the Temple of Saturn. 12. Main flight of steps, of which only the concrete core remains. 13. Start of the small side stairs to the chamber under the main flight of steps. 14. The only piece existing of the ancient basalt paving, see p. 156.

15. Platform of the *Porticus of the Dii Consentes*.

16. Upper door in the *Tabularium* blocked up by the *Porticus of the Dii Consentes*. 17. Door at foot of stairs of the *Tabularium* (shown at p. 240), blocked up by the Temple of Vespasian. 18. Travertine paving of the time of Domitian. 19. Pedestal or Vespasian's Statue.

20. Three existing columns of the Temple of Vespasian.

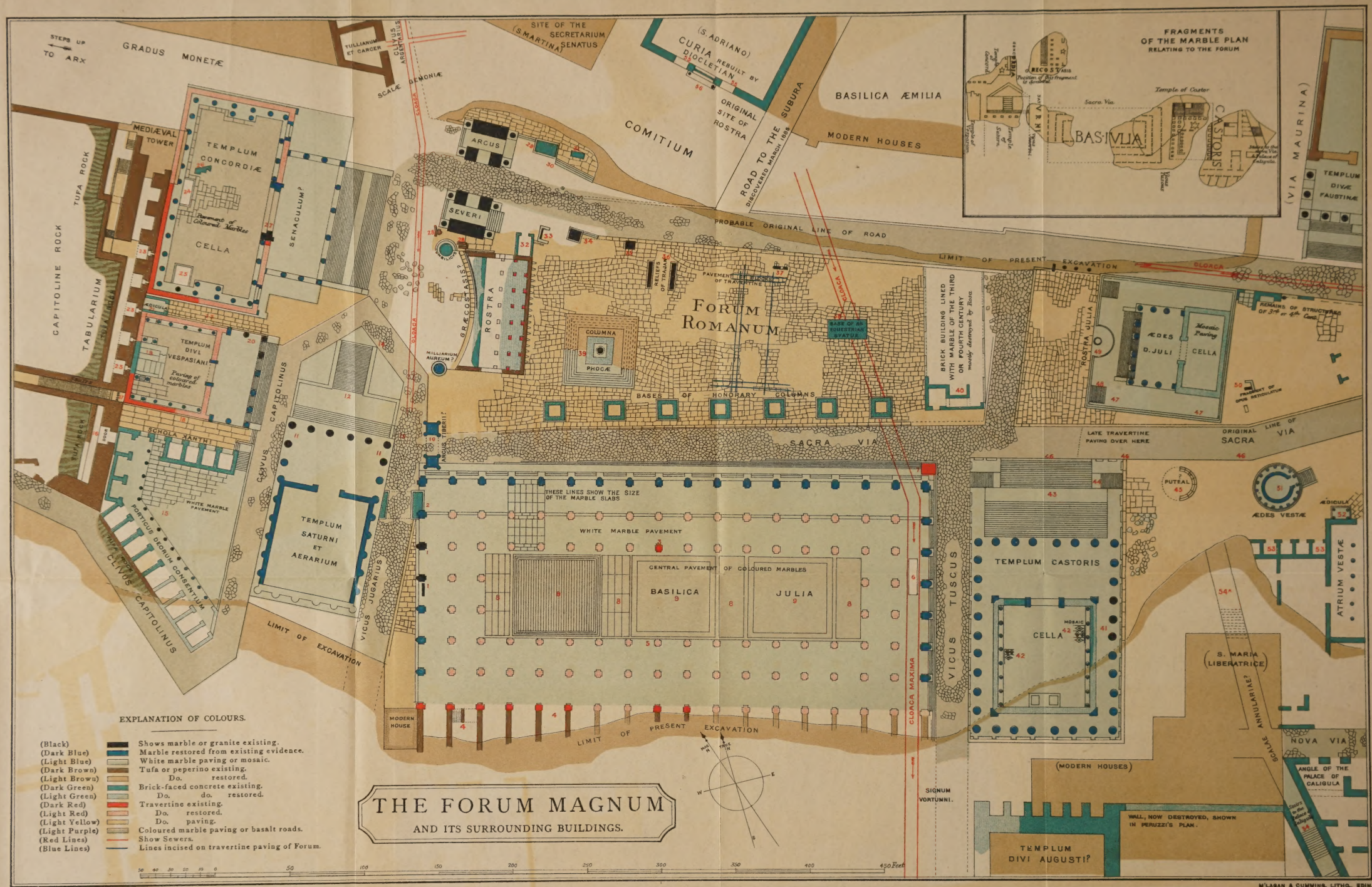
21. *Ædicula* built by Domitian. 22. Travertine paving of the time of Domitian. 23, 23. Long passage and windows in the lower story of the *Tabularium*.

24. Pedestal of the Statue of Concord. 25. Pedestal added by one of the Flavian Emperors.

26. Fragment of a later pedestal. 27. White marble door-jamb and massive threshold of *porta santa* marble.

28. Remains of some early structure in tufa.

29. Three travertine steps down to lower paved level, perhaps that of the *Comitium*. 30. Marble steps to this lower level.
31. Large marble pedestal (not *in situ*) inscribed to Fl. Jul. Constantius.
32. Late addition to *Rostra*.
33. Remains of a small marble structure.
34. Marble pedestal of a column, with rude reliefs of the fourth century.
35. Marble pedestal of an Equestrian Statue, set on end, and inscribed to Arcadius and Theodosius.
36. Marble walls (*plutei*) with reliefs of the time of Trajan (not *in situ*).
37. Remains of a small marble structure.
38. Large concrete core of a late pedestal.
39. Steps to the column of Phocas, part marble and part tufa.
40. Late building of brick and concrete lined with marble.
41. Existing three columns of the Temple of Castor.
42, 42. Existing pieces of mosaic pavement.
43. Main steps of the Temple of Castor.
44. Side steps ; only the three lowest remain.
45. Part of circular travertine curb ; *puteal Scribonis ?*
46, 46. Original line of Sacra Via, covered with late paving of travertine.
47. Line of side steps of *Œdes Divi Julii*.
48. Small front stairs up to podium of *Œdes Divi Julii*.
49. Curved recess in podium, which probably once contained an altar to Divus Julius ; now blocked up by late masonry.
50. Fragment of a wall faced with *Opus reticulatum*.
51. Concrete core of the podium of the Temple of Vesta.
52. Small *Ædicula* by the entrance to the *Atrium Vestæ*.
53, 53. Shops adjoining the *Atrium Vestæ*.
54. Stairs from the *Nova Via* up to the *Clivus Victoriæ* and Palace of Caligula.
54A. Stairs shown on a fragment of the marble plan leading up from the level of the Forum to that of the *Nova Via*.
55, 55. Windows in the *Curia* of Diocletian (S. Adriano), now below the ground level ; see Fig. 14 on p. 150.
56. Marble doorway shown by Du Perac (now missing).



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